

Archivum.



Most of

The plants here enumerated were procured
on a small island called Ura Kanitsche-
tschen & sometimes Biene It is the
same that is separated from the main
by the strait called by Russian Botanists
Sugavin strait. The collection was made
between the 4th of August & the 13th of Sep-
tember. Containing little or nothing of novelty
botanically considered it yet adds something
to our knowledge of the geographical dis-
tribution of northern plants

Meanwhile Mr Small on the Steamer
landed at several places on the shore of the
Okhotsk Sea & added a variety of interest-
ing things to those obtained at Behring's
Strait

Arctic Asia

Astragalus alpinus L
Thlaspi alpinum L
Anemone narcissiflora L
" *coerulea* DC
" *Richardsonii* Hook
" *parviflora* Mx
Ranunculus aquatilis L
" *hyperboreus* L
" *pygmaeus* Tratt
" *nivalis* L
" *affinis* R Br
Leathrum palustre L
Aconitum Lycocanthum L
" " " var *rannunculoides*
" *productum* Reich
Koanschateca Pall
" *deltphinifolium* Reich
Daphne mezereum L
" *Middendorffii* Traub
Panax alpinum L
Dicentra canadensis DC
Borysthenes amurensis Bham & Schlecht
" *peoniaphloia* Pers
" *pauciflora* " var *elegans*
Barbarea vulgaris R Br
Arabis hirsuta Scop.
" *Kamtschataea* Reich
Lardamia bellidifolia L

Leontopodium hispanicum Cham. & Schlecht
Lamium galeobdolon L.
 " *hirsutum* L.
Dentaria leucophaea Ledeb
Polygonum macrorhizum R Br
Draba alpina Adams
 " " - var *macrorhiza*
 " *alpina* L.
 " *affinis* Ledeb
 " *nivale* Ledeb
 " *hirta* L.
 " *incana* L.
 " *gracilis* Ledeb
 " *stanslotei* Ledeb
 " *nemorosa* L.
Leptolema oblongifolia Dk
 " *Anglica* L.
 " *Davurica* L.
Illiuspi cochleariforme St.
Sisymbrium pectoroides Hook
Erysimum cheiranthoides L.
Polygonum purpureum Brongz
Ceratomea Edwardsii R Br
Viola Selkirkii Pursh
 " *hastata* L.
 " *sylvatica* Fries
Parnassia palustris L.
 " *Kotzebuei* Lh. Schlecht
Dianthus repens Willd
Silene acaulis L.

Silene pauciflora Ledeb
 " *inflata* Sm
 " *prostratum* Muell
 " *ochotensis* sp. nov.
 " *repens* Patin
Melandrium apetalum Griseb
Silene Gunnai Pers
Alsine vernae Bait
 " *macrocarpa* Griseb
 " *arctica* Griseb
Honkenya heptaphylla Chrck
Merckia physodes Fisch
Moehringia lateriflora Fisch
Stellaria crispa Cham & Schlecht
 " *gracilis* Richardson
 " *longipes* Goldie
 " *florida* Fisch
 " *truncata* Rollb.
Geranium vulgatum L.
Geranium erianthum Dk
Liatris aestivalis Willd
Molinia longistylis L.
Astragalus alpinus L.
Oxytropis vulcanica Dk
 " *Herbeusina* Fries
 " *campestris* Dk
Phaea Aboriginea Hook *Oxytropis*
Primula matthioli Linn
Lathyrus palustris L.
Pedicularis borealis Nutt
Spirea betulifolia Pall

Spiraea Arvensis L
Dryas octopetala L
" *integripolia* Dahl
Tanacetum officinale L } distributed among Jap plants
" *temnoselinum* Frisch
Lamium strictum Ait.
Succowia glacialis R. Br
" *Reticulata* R. Br.
" *anemoneoides* Wilt
Potentilla Norvegica L
" *stolonifera* Lehm
" *ausenaria* L
" *nivosa* " "
" *vulgaris* Pall
" *biflora* Wilt
" *fruticosa* L
" *elegans* Cham. & Schlecht
Rubus saxatilis L
" *chamaemorus* L
Rosa cinnamomea L. var
" " "
Pyrus communis Cham & Schlecht
Coprosma angustifolia L
" *latifolia* "
" *oreocarpella* Gunn
" *alpina* Boj. ~~Boj.~~ L
" *affinis* Remy
~~Gallinaceae~~ *Hippocratea montana* Ledeb
Gallinaceous vern L
Ribes
Ombellifer spinosa Dc
Sedum elongatum Ledeb
" *Rhodiola* Hs
" *cyanescens* Rudolph

Sedum Aboian L.
Saxifrage oppositifolia L.
" *bronchialis* "
" *nitida* Schreb
~~*Roschschottia*~~ *Stemb*
Merkii Fisch
" *Strigulos* L
" *stellata* L
" *Davurica* Pall
" *nivalis* L
" *hercynica* Waldst & Kots.
" *punctata* L
" *nudicaulis* Don
" *cernea* L
" *bracteata* Don
" *rotundifolia* L.
" *silenefformis* Stemb
Oxyosplenium Kuntschaticum Schlecht
" *alternifolium* L
Ogotorodium alpestre Ledeb
Buniferum caninoides L
Ligusticum Scotticum L
Conioselinum Fischeri Wimmer & Grabowski
Archangelica lychnidis D.C.
Cornus suecica L
" *canadensis* L.
Sambucus racemosa L
Lonicera nigra L
" *coerulea* L.
Ginnex borealis Lpou
Dryovilla

Galium boreale L
" *verum* " *verum*
Valeriana capitata Pall
Nardosmia frigida Hook
Aster sibiricus L.
Drigeron uniflorum L
" " *elongatum* Ledeb
Solidago Virgaurea L
Achillea Sibirica Ledeb
Tenuanthemum integrifolium Ledeb
" *arcticum* " "
" *sibiricum* " "
Panacium vulgare L.
" *Pallasianum* Granti
Artemisia borealis Pall
" *Norvegica* Fries
" *vulgaris* L
" *glomerata* Ledeb
" *Sibiricensis* Besser
Antennaria alpina Re Br.
Agoseris Sibirica Less
Leucalia hastata L
" *arriculata* Ledeb
Arnica alpina Lessce
Senecio frigidus Less
" *ruscifolius* Less
" *hookeri* Gray & Gray
" *octoglossus* Ledeb
" *Pseud Arnica* Less
Saussurea subsinuata Ledeb

Saussurea Gilesii Ledeb
" *augustinotolii* Ledeb
Scorzonera radiata Gaertn
Hieracium umbellatum L
Mulgedium sibiricum Less
Phryaxium Scut-leonis Desf
" *ceratophorum* Ledeb
Campanula expansa Rudolphi var *dentata*
" " "
" *uniflora* L
" *Vaccinium myrtillus*
" *Vitis Idaea* L
" *uliginosum* "
Antostaphylos alpina Sprang
Cassiope tetragona Don
" *eroides* "
Phyllodoce Taxifolia Salisb.
Loiseleuria procumbens Desv.
Rhododendron Lapponeum Wahl
" *Kantschaticum* Pall
Ledum palustre L
Pyrola rotundifolia L
" *secunda* "
Moneses uniflora Gray
Primula minima Pall
" *borealis* Duby
" *cuneipetala* Ledeb
Androsace arctica Cham. & Schlecht
" *chamaepitys* Koch
" *septentrionalis* L.
Dridicatheron frigidum Cham. & Schlecht

Orientalis Europaea L.
Gentiana austriaca Pall
 " *tenella* Rottl
 " *propinqua* Richards
 " *barbata* Froel
 " *prostrata* Honke
 " *frigida* Honke
 " *glauca* Pall
Pleurogyne leaintia Giseb
Kalemia sibirica Borkh.
Sweertia obtusa Gedeb
Polemonium caeruleum L
 " *pratense* Brunge
Diapensia lapponica L.
Mertensia maritima G. Don
 " *divaricata* G. Don
Ajuga sylvatica Hoffm
Drepanocarpus arctioides A. Nels
Vernonia sessypyllifolia L
Bastilleja pallida Kunth
Bartsia alpina L
Pedicularis verticillata L
 " *resupinata* L
 " *subbrasivoides* Stev
 " *sudetica* Willd
 " *lanata* " "
 " *versicolor* Wahl
 " *capitata* Adam
Boschniakia glabra B. C. Meyer
Gymnandra Stelleri Chaud & Schlecht
Statice
Rheum Rhaponticum L
Oryzopsis nemiformis Hook
Rumex Fructuoso
 " *aestuosa* L
 " *aestuosa* "

Rumex graminifolius Lumb

Noemagia Islandica L.

Polygonum Bistorte L.

" *viviparum* L

" *polymorphum* Ledeb

" *triplocauleum* G. W.

" *divaricatum* L

Oxytropis nigra L

Salix leahnei L

" *phylicarpa* L

" *hastata* L

" *rhamnifolia* Pall

" *glauca* L

" *arctica* Pall

" *Uva-ursi* Pursh

" *articulata* L

Salix polaris Wahl

" *retusa* Tourn

Populus suaveolens

Betula ermanii Cham

" *fruticosa* Pall

" *nana* L

Alnus viridis DC

Prunus capraea Griseb

" *Sibirica* Ledeb

" *lecentia* L

Triglochin palustris L

Grevillea aristata Griseb

Penstemon viridis Lindl

Iris setosa Pall

" *Pseudacorus* L?

Trillium obovatum Pursh
Streptopus roseus Mx
Smilacina trifolia Desf
Leloydix serotina Salisb
Allium splendens Willd
 " *Schoenoprasum* L
Fritillaria
Veratrum album L
Gagea palustris Huds
 " *coccinea* Brown
 " *calyculata* Wahl
Lentibula pilosa Willd
 " *Spadicea* Dp
 " *arcuata* Wahl
 " *campestris* Dp
 " *spicata* Dp
Juncus castaneus Sm
 " *triglumis* L
 " *bogotensis* L
Ondosthorax vaginatus L
 " *capitatum* Host
Chamaissonea L. C. Meyer
 " *angustipolium* Roth
 " *latipolium* H. W. Moore
Drymna spicata Hook
 " *caricina* Mert. & Koch
Learey sisypheoides Mx
 " *nardina* Thres
 " *incurva* Lighty.
 " *lugubrina* Wahl
 " *glauca* Wahl
 " *accuta* Dewey

Learey rufiflora Smith
 " *fuliginosa* Stevns & Asper
Gmelini Hook & Arn
rigida Good
 " *stans* Dreyer
Hyperborea Dreyer
cryptocarpa Meyer
saxatilis L.
 " *compacta* Br
Tolmiei Bratt
procera Gaey
epipillaris L
longirostris Meyer
 " *ampullacea* Good
Glymnis mollis Trin.
Festuca ovina var *vivipara* L
 " *brevijolia* R. Br
 " *scutellata* Donn
Poa articula R. Br
 " *casia* Sm
 " *memorialis* L
leolpodium fulvum Gedeb
 " *latifolium* R. Br
Dupontia Fischeri R. Br.
Catabrosa algida Trin
Atron angustata Ledeb.
Glyceria distans Wahl?
 " *arctica* Hook
Hierochloe alpina Roem. & Schultes
Trisetum subspicatum Beauvois

Aira brevifolia R. Br
" *cospitum* L

Aulamugrostis deschampsiioides Griseb
" *strigosa* Borg
" *canadensis* P. Br. B.

Phleum alpinum L

Equisetum arvense L

" *sylvaticum* L

" *variegatum* Schlecht

Lycopodium Selago L

" *annotinum* L

" *complanatum* L

Sitopinella rupestris, Spring

Polyodium Dryopteris L

Woodsia ilvensis R. Br

" *gibbula* "

Aspidium fragrans Br

" *spinulosum* Br

Cystopteris fragilis Bernh

Asplenium filix-femina "

Blechnum spicant Roth

Ranunculaceæ.

Tragene alpina, Linn. A. alpina & A. Ochotensis, Ledeb. Fl. Ross., 1, p. 4. Clematis alpina, Willd.; Ghann. & Schlecht. in Linnaea, 6, p. 571. C. Sibirica, Willd.; Hook. & Arn. Bot. Beechey, p. 111. Tragene platysepala, Traub. & Meyer, Fl. Ochot., in Abidendax. Sibir.) p. 5; Petropavlovskii, climbing among bushes

Specimens from the same station and of the same date have both linear, narrowly spatulate, and some of them more broadly spatulate and remarkably large petals, thus obliterating the principal distinction between A. alpina, A. Ochotensis, and the recently proposed A. platysepala. The sepals also vary from ovate to narrowly oblong, the shape evidently depending much upon their age. The geographical range of this species is from the Pyrenees and the Alps, through Siberia to the Okhotsk sea and Kamtschakka, reappearing on the American continent in the Rocky Mountains, about Lat. 44° (Tragene Columbiana, Nutt. in Torn & Gray, Fl. 1, p. 11) and in Lat. 36°, (A. Ochotensis, Gray, Pl. Fendl. p. 4). But it appears to be absent from all

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Scandinavia and from Eastern North America; adding another to the numerous instances which indicate a stronger botanical connection between the New and the Old World via Siberia &c. than via Canada and Western Europe.

Thlaspium alpinum, Linn. H.

Prod. I, p. 12; Torr. & Gray, Fl. s. 39. Uralo-
tschetschene Island.

The specimens are uncommonly large 4-10' high; flowers purplish-anthers yellow.

Anemone narcissiflora, Linn. bar-
monantha, H. Prod. p. 22; Cham. & Schlecht.
in Trunca, 6, p. 376; Zedeb. Fl. Ross. I, p. 18.
Uralo-tschetschene Island.

In appearance, this is strikingly distinct from the ordinary state of the species (which was not met with), being smaller and the numerous specimens, both in blossom and in fruit, being uniformly one-flowered.

Anemone Richardsoni, Hook. Fl. Bor-

Am. I, p. 6, t. 4; Zedeb. Fl. Ross. I, p. 16.
Uralo-tschetschene Island.

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Anemone coerulea, Dc. Syst. I, p. 203;
Ledeb. l. c. Arakamtschekene Island.

The leaves of the involucra show an occasional incision. The flowers are uniformly solitary.

Anemone parviflora, Michx. Fl. Bor.
Am. I, p. 319; Dc. Prodri. I, p. 19; Torn. & Gray,
Fl. I, p. 13. Arakamtschekene Island.

Ranunculus aquatilis, Linn. var.
divaricatus, R. divaricatus, Schrank, R.
circinatus, Sibth. Margin of pools, Arakamtschekene Island

Ranunculus hyperboreus, Pottb.; G. Fl.
Prodri. I, p. 35; Ledeb Fl. Ross. I, p. 35. In
pools, Arakamtschekene Island

^{Alt. name p. 61}
Trant. (in Wiedenb. Sibir.)

Ranunculus pygmaeus, Wahl.; Dc.
Prodri. I, p. 35; Hook. Fl. Bor.-Am. I, p. 16;
Ledeb. Fl. Ross. I, p. 36. On hillsides and sand-
beaches, Arakamtschekene Island. (Flowers yellow)

Ranunculus nivalis, Linn. Wahl. Fl.
Suppl. p. 156; Schlecht. Ranunc. Annad. 2, p.
14; R. Brown, in Parry's Voy. Suppl. p. 264;
Hook. l. c. Ledeb. l. c. Damp grounds and

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margins of pools, Crakanische
Island

Plant from four or five inches to more than a foot in length and varying in foliage, especially in the radical leaves, as described by Schlechtendal and by Brown. The radical leaves of the larger specimens are, for the most part, just those of *R. fujigidus*, Willd. (*R. Altaicus*, Gaym. & Gedeb.), being incisely ovate or slightly several-lobed, rather than deeply 3-5-lobed or parted (although they sometimes are so). Were it not that the petals are quite entire and their veins seldom anastomosing, we could not hesitate to reduce *R. fujigidus* to this species, contrary to Brown's and Schlechtendal's opinion; indeed it can hardly be expected to remain distinct upon these characters. The style forms a slender and straight beak, a little shorter than the massive acheneum.

Ranunculus affinis, R. Brown in Barry's

1. Voy. App. p. 263; Schlecht. Ranunc. Animas,
2, pl. 18; Trautv. Fl. Taimyr. p. 62, (in Middendorf.
Sibir.). Crakanische Island

The leaves have commonly the middle lobe entire and larger than the others which

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decrease in size to the margin. The capsules are not perceptibly pubescent.

Caltha palustris, Linn. Db. Prod. I.
p. 44; Hook. & Arn. in Bot. Beechey, p. 112.
Margin of pools, Petropavlovski. Coal Bay,
~~in~~ J. Small's var. Radicans. C. radicans,
Florsh in Trans. Trans.; Db. l. c. Arakamchetchen
Island.

Delphinium elatum, Linn.; Wedd.
H. Ross. I. p. 61. Hillsides and ravines, Ayau,
shore of Chototsk Sea. J. Small.

This certainly belongs to D. elatum as that species is received by Gedebour. It accords in many, but not in all respects with the D. laxiflorum var. Geocarpum of Trautv. & Meyer H. Cehit. l. c. p. 11. Perhaps it is rather their D. intermedium; but the stems are pubescent and the ovaries glabrous.

Delphinium Middendorffii, Trautv.
H. Taimyr. (in Midden. Sib.) p. 63, t. 1.
Arakamchetchene Island.

Trautvetter's figure and description leave no doubt that our specimens belong to this Arctic Siberian species, although they are rather larger; the stem is pubescent,

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and the lower petals generally more notched. The thick and oblique or horizontal caudex, the large, long-spurred flowers, and the densely tomentose ovaries are characteristic. It may be also the imperfectly known *D. paniculatum* of Reichenbach, which came from the same region as our plant, but the characters do not accord. On the other hand it might be compared with the Western American *D. Meekesii*, which was gathered at Botzeliu's Sound according to Hooker and Arnott, and extends to Cape Lisburne, according to Steemann. But the rootstock is very unlike the grumose-tuberous root of that species, the plant is much stouter, more leafy and the lower petioles much more dilated.

Aconitum delphinifolium, Richemb.

Monogr. gen. Aconit. p. 79 t. 9. A. Napellus, var.
delphinifolium, Hork. & Arn. l. c.; Ledeb. l. c.
Arakamtschatschene Island.

Aconitum Kamtschaticum, Reichenb. l. c.
Sl. l. c. Pall. ex Reichenb.; Schlecht. in Linnæa,
6, p. 582; Ledeb. l. c. D. N. S. Sturz. J. G. Smith.
H. Blue. Flowers blue. on hillsides. Fabius Bay & Coal Bay
J. Small

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Aconitum productum, Reichenb.; Ledeb.
l.c.; Dc. l.c. Aka-kantkhetene Island.

They were collected in different localities plants belonging apparently to the three species above-named, but the Blights differences in the form of the hood and spur, the greater or less length of the points of the helmets, the denseness or laxness of the raceme, and the difference in pubescence, seem hardly sufficient data on which to establish three species. They all probably belong to A. Napellus.

Aconitum Lycocotonum, Linn.; Ledeb. l.c.;
Trautv. & Mayer, Fl. Ocht. sin. Irkutsk. Siberia.
P. II. Ayan, J. Small.

The specimens are of two forms one rather stout, erect; raceme densely many-flowered; flowers light yellow. The other is slender, with few leaves and a raceme with few, distant, smaller, light greenish flowers; perhaps A. Lycocotonum, var. rannunculoides, Griseb. Fl. Balk. I, p. 48.

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Papaveraceæ.

Papaver alpinum, Linn.; Fructu. Fl.

Taimyr. sp. 60, (in Biddend. Sib.). P. alpinum,
var. nudicaule, Ledeb. Fl. Ross. 1 p. 87. P. nu-
daule, Dc. Prod. 1, p. 117. Arakamschitchene
and Herato Islands.

(9)

Fumariaceæ.

Dicentra tenuifolia, Dc.; Ledb. D. tenui-
folia & lachenalidiflora, Gedeb. Fl. Ross. I, p.
97. Diclytra tenuifolia & lachenalidiflora, Dc.
Syst. 2, p. 111, & Prod. 1, p. 126. Fumaria.
tenuifolia, Gedeb. in Mem. Acad. St. Petersb. 5,
p. 550. Corydalis tenuifolia, Pursh, Fl. 2, p.
462. Ayan on bare hillsides. "Small
flowers pink"

The specimens of this interesting little plant all belong to the D. lachenalidiflora as that is distinguished by De Candolle, none of them having quite so short pedicels nor so blunt lobes to the leaves as D. tenuifolia according to the description by De Candolle and the figure in Diless. Ic. Sel. 2 t. 9. But the differences indicated rest upon such insufficient materials and such imperfect comparisons, and relate to points so unlikely to be constant that we have no hesitation in uniting the two supposed species, as Ledebour was inclined to do. In doing this the name tenuiflora is preferred as having been earlier used, both by Ledebour and by Pursh, for both forms; and as being particularly appropriate. The numerous and very fine specimens

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were collected by Mr. Small on the first of September, and are all in flower.

Corydalis pauciflora, Pers. Syn. 2, p. 69; L. Prodr. 1, p. 127; Deless. Ic. Pl. 2, t. 9; Hook. & Arn. Bot. Beechey, p. 121; Ledeb. Ic. Pl. Alt. 5, t. 450, & Fl. Ross. 4, p. 97.

Var. exigua: tenuior; foliis submembraneaceis; calcare adscendente cylindraceo recto vel parum incurvo. — Crakanuschetchene Island.

I was not myself so fortunate as to find this plant; but a few specimens were brought in by Purser W. B. Boggs. Like those from the Island of St. Lawrence, of which the acute Gedebour noticed the peculiarities, these specimens differ not a little from the Siberian plant, and still more from Delesset's figure. The leaflets are much shinier; the flowers still fewer, and the long and the large spur, strikingly ascending, proportionally thicker towards the base, more regularly cylindraceous, and nearly straight, instead of incurved; so that we are not surprised that Gedebour should have questioned its really belonging to C. pauciflora. That, we may add, is erroneously represented in Delesset's figures as to the shape of the corolla; for the spur is, in fact, much longer than the limb, instead of much shorter, as it is depicted Gedebour's figure rightly.

represents the flower. The corolla in our plant is purple.

Corydalis ambiguus, Cham. & Schlecht.,
in Linnaea, 1, p. 558; Hook. & Arn. Bot. Beechey,
p. 112; Ledeb. Fl. Ross. 1, p. 101. Petropavlovski;
on hills in damp and rich soil.

The plant accords well with Chamisso's specimens. Flowers purple. Raceme varying from two to six inches in length. Strophiole of the seed obovate and entire.

Corydalis paucifolia, Pers. Syn. 2, p. 869;
Dc. Prodr. 1, p. 269. Cham. & Schlecht. l. c.; Ledeb
~~etc.~~ Fl. Ross. l. c. Tschantar Island, J. Small; on
shady hillsides

var. humilis; subpedata, foliis multo
minoribus. Ayan in valleys, J. Small.

Plant of extraordinary size for the genus; the foliage well compared with that of a Peonia. The thick tuberous root is nearly two inches in diameter at the crown, where it is invested with thin scales, abruptly narrowed below; corolla purple. In the variety, as we doubt not it is, the leaves of the smaller specimens are only 5 to 6 inches long including the petioles, and the leaflets small in proportion. But the plant is young.

Corydalis pauciflora Pers. Duck 2, p. 69. 86. Prodr 1, p. 127
Aru Kamtschechen I.

(12)
Brassicaceae.

Barbara vulgaris, R. Br.; Dc. Prod. l. c.

l. p. 140; Leob. Fl. Ross. l. p. 114; Hook. Fl. Bor. Am. l. p. 39. Petropavlovsk. Coal Bay Small

Arabis hirsuta, Scop.; Dc. Prod. l. c.,

Leob. Fl. Ross. l. c.; Hook. Fl. Bor. Am. l. c.

~~Western coast of Yesso~~; J. Small Petropavlovski.

Arabis Kamtschatica, Fisch.; Leob. Fl. Ross. l. c.

A. lyra, var. Kamtschatica, Dc. Prod. l. p. 146. ~~Lyra~~

Sisymbrium aralidoides, Hook. Fl. Bor. Am. p. p.

63, t. 21. Petropavlovski.

We have specimens varying very much in form and size; from those with a single slender stem furnished with 4-6 linear-lanceolate leaves, the lower commonly incised or toothed the upper entire; to those which are stouter, very much branched and exactly resembling Hooker's figure of Sisymbrium aralidoides. They are all furnished, at base, with a rose-ulate cluster of leaves more or less deeply dissected, though those of the smaller specimens are sometimes nearly entire. The cotyledons are incumbent and the elongated pods are erect. It is probably specifically distinct from the A. lyra of the White Islands as suggested by Dr. Gray in ^{the} Manual of Botany p. 33.

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Cardamine bellidifolia, Linn.; Fl. Prodr.

1, p. 150; Ledeb. Fl. Ross. 1, p. 123; Torr. & Gray, Fl.
1, p. 84; Fruct. Fl. Tasmania, p. 54 (in Middled. Sib.)

Arakamtschekhene Island.

The ^{numerous} specimens with well-grown fruit vary
from less than inch to three or four inches in
heights.

Cardamine purpurea, Cham. & Schlecht.
in Linnaea, 1, p. 20; Hook. Fl. Bor. Am. 1, p. 44.

Var. abiflora: glabra; foliis non angulato-
uni-dentatis; Stylo brevi.—Arakamtschekhene
Island.

Our specimens are mostly from two to five
inches high, from a long creeping root, with about
five leaves, not strictly radical, but scattered at
about equal distances along the lower part of the
stem; a few serrate but the greater number quin-
ately pinnate; the terminal ^{leaflets} mostly orbicular
in outline slightly three-lobed; the lateral ones oval,
entire, or with one or two short lobes or teeth. Raceme
of rather large white flowers somewhat compact, (some
fruiting specimens particularly so) the lowest flower
in one or two cases subtended by a bract or reduced
leaf.

Notwithstanding the points of difference indicated
above there is little doubt that our plant is a variety
of Chamissia. b. purpurea; an unfortunate name

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in any case, since the color of the petals is not likely to be constant. For example, those of *C. pratensis* and *C. shumardii* in the United States vary from deep rose-color or purple to pure white. On the other hand our specimens differ from *C. angulata* of Hooker only in their smaller size and in their pinnate leaves almost uniformly of five leaflets. But some of Dr. J. K. Bigelow's specimens from the Sierra Nevada of California are quadrifoliate; and the suite of specimens in Dr. Gray's herbarium leads to the conclusion that *C. angulata*, ~~Hook.~~ & *C. paniculata* Benth. are forms of one polymorphous Western American species which ranges from the eastern side of Behring's Straits to California.

Ludmania pratensis, Linn.; D. C. Prod.
1, p. 151; Hook. Fl. Bon.-Am. 1, p. 45, var. au-
gustifolia; Ledeb. Fl. Ross. 1, p. 125; Mantv.
Fl. Taimyr. (in Meddenc. Sibir.) p. 54; Rupr.
Fl. Samoyed. censur. No 34. Arakantschetscheen
Island. Coal Bay. J. Small

Ludmania hispida, Linn.; D. C. Prod.
1, p. 152; Hook. Fl. Bon.-Am. l.c.; Ledeb. Fl. Ross.
1, p. 127. Petropavlovski.

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A form with remarkably undivided leaves; only the lowest being pinnately-paired.

Lentaria tenuifolia, Ledeb. Scen. Acad.

Petersb. 5; 1815, p. 547; G. Prod. 1, p. 156; Hook. Fl.
Bor.-Am. 1, p. 56; Gravir. M. Cebot. (in Middendorf,
Sibir.) p. 16. Shantar Island, J. Small.

The leaflets of the caudine leaves (radical ones wanting) are broader than they are represented in the descriptions and figures; the tubers are much compressed and plane-concave.

Parrya macrocarpa, R. Br. in Parrys 1

voy. App. p. 268; Gravir. Fl. Taimyr. (in Middendorf
Sibir) p. 55. P. macrocarpa, var. glabra, Hook. Fl.
Bor.-Am. 1, p. 47. Damp stony hills, Coal Bay,
J. Small. Ushakanischetchem Island.

There seems to be nothing in the descriptions of P. Linneana, Ledeb. Fl. Ross. 1, p. 131, and P. macrocarpa of sufficient importance to constitute them distinct species, and some of our plants (allowing for the lengthening of the raceme with age,) exactly answer to the figure in Tern. Amoen. Acad. 2, f. 20, except that the petals are obtuse, while they resemble the figures in Hook. l.c. except as to the pubescence, so closely as to leave no doubt that they are the same species. Most of the specimens, however, as well flowering as fruiting-

ones have the leaves narrowly lanceolate and entire, notwithstanding they were collected at different stages of growth and in ^{different} ~~the same~~ localities.

Draba algida, Adans; G. Prodr. 1, p.

167. Hook. Fl. Bon. Am. I, p. 150; Ledeb. Fl. Ross. I, p. 146; Trautv. Fl. Taimyr. (in Middle Siberia) p. 56. Irtykamtschetskhe Island, fruit.

And, var. racemo laxo 3-5-floro; pedicelles elongatis; siliculis hispidulis immaturis linearis-oblongis in stylum longiusculum attenuatis; Arakamtschetskhe Island, in flower & young fruit.

In the leaves with their margins fringed with long and bristly hairs, and in most of their characters our specimens accord with *D. algida*, of which we have not seen the fruit. But they are pretty large (scapes often four inches high); the flowers or siliques on rather long peduncles pedicels; and the style is not very short. The fruitiferous plant here referred to this plant here referred to this species has its siliques from 3 to 4½ lines in length, varying ovate-oblong to broadly oval. The variety with its immaturae siliques from 4 to 5 lines long on pedicels fully 3 lines long, if rightly referred to this species must resemble the var. macrocarpa of Ledebour.

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Draba alpina, Linn.; G.C. Prodr. C. e.,
Hook. Fl. Bon-Am. C. e.; Ledeb. C. e.; Trautv.
Fl. Taimyr. (in Norddeut. Sibir.) p. 57. On stony
hills, Arakamtschetsche Island.

The silicles are broadly oval; otherwise
the specimens agree with the Norwegian plant.

Draba affinis, Ledeb. Fl. Ross. I, p. ~~114~~
148. Arakamtschetsche Island.

Perhaps too near to D. repens, Biebr.

Draba nivalis, Leb. ebl. in nov. act. ~~114~~
Topal. 6, p. 49, t. 2, f. 2. D. mucella, Nauk. Fl.
Lapp. p. 174; G.C. Prodr. C. e. Arakamtschetsche Island.

Our plant differs from D. nivalis in no
respect except that the pods are rather too short.
(From D. frigida, found in this region by the
Russian Botanists,) it differs in the perfectly
leafless scapes and closely cuneate (not toment-
ose) leaves.

Draba sibirica, Scop.; G.C. Prodr. C. e.; Hook.
& Arn. Bot. Beechey, p. 121; Fl. Bon-Am. I, p. 52.
Trautv. Fl. Taimyr. (in Norddeut. Sibir.) p. 58.
Arakamtschetsche Island

Draba incana, Linn.; Hook. Fl. Bor.-
Am. I, p. 54; Ledeb. Fl. Ross. l. c.; Rupr. Fl.
Cisural. No. 29. D. confusa, Gl. Prodr. l. c.
Traub & Meyer, Fl. Cehst. (in Midden. Sib.) p. 16.
West coast of Yesso, J. Small.

Draba gracilis, Ledeb. Fl. Ross. l. c.

D. confusa, var. paeonifolia, Gl. Prodr. l. c. Petropan-
kovskii. Arakamschetschene Island.

Draba stenoloba, Ledeb. Fl. Ross. I, p. 154.

D. hirta, var. siliquosa, Cham. & Schlecht. in Lin-
naea, I, p. 23. Arakamschetschene Island.

Draba nemorosa, Linn.; Gl. Prodr.
l. c.; Ledeb. Fl. Ross. l. c. Locality uncertain

Cochlearia oblongifolia, Gl. Syst. 2, p.
363; Ledeb. Fl. Ross. l. c.; ~~Jamnik~~ Rupr. Fl. Samo-
Cisural. No. 24. ~~G. neglecta~~ Trautv. Fl. Yarmys. (in
Midden. Sib.) p. 58. Yamtskelpul, J. Small
(Arakamscheschem Island)

Cochlearia Anglicum, Linn.; Ledeb. Fl.
Ross. l. c.; Hook. Fl. Bor.-Am. I, p. 57. Younoughi
Island

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Cochlearia Davidii, Linn.; G. Prodr. I, p.
173; Hook. Fl. Bor.-Am. C. e. Hirato Island, off
coast of the Vincennes, Arakamtschekine Island.

Thlaspi cochleariforme, G. Prodr. Syst.
2, p. 381; Ledeb. Fl. Ross. C. e. Hook. Fl. Bor.-Am.
I, p. 58. Shantar Islands, J. Small

The wing is not conspicuous as represented
in Desvaux's figure (Lc. 2, t. 52.) in fact it is nearly
obsolete and the lower leaves are without serrations.

Aisyntrium esphioide, Hook. Fl. Bor.-Am.
I, p. 61, t. 20; Ledeb. Fl. Ross. I, p. 181; Granti. Fl.
Parry, (in Nodden. Sib.) p. 39. On pebbly beach-
es near the sea, Arakamtschekine Island.

Orysimum cheiranthoides, Linn.; G.
Prodr. I, p. 198; Ledeb. Fl. Ross. I, p. 89; Granti.
and Meyer, Fl. Ochot. in Nodden & Sib. p. 18;
Rupr. Fl. Samoyed. Cisural. No. 35. Petropavloski.

Bryza purpurea, Bunge in Ledeb.
Fl. Ross. I, p. 195; Granti. Fl. Parry, (in Nodden.
Sib.) p. 60. Platypetalum purpurea, R. Br. in
Parry's I. Voy. App. p. 268; Hook. Fl. Bor.-Am. I,
p. 66, t. 28. Arakamtschekine Island.

Our specimens differ from the figure in
Hooker l. e. in having much narrower leaves

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and pods, the latter varying from $2\frac{1}{2}$ to 5 lines
in length and from minutely pubescent to quite
glabrous.

Eutrema Edwardsii, R. Br. in Parry's
1. Voy. p. 267 t. A; Zedch. Fl. Alt. 3, p. 163;
Hook. Fl. Bon-Am. 1, p. 67. Draba lewissiana,
Cham. & Schlecht. in Griseb. 1, p. 25. Cruckmania
etchem Island.

Violaceæ, (A. G.)

Viola Selkirkii, Pursh (vide Coll. Jap. p. 1); var. Kantschatica. V. Kantschatica, Ging. in Linnaea, i, p. 406; Ledeb. Fl. Ross. t. p. 245. Petropavlovskie.

The specimens, although larger than the imperfect ones communicated by Chamisso to Gingins, can hardly be referred to Viola Selkirkii of Canada. They accord with Viola Selkirkii of Canada (which seems undistinguishable from V. umbrosa, Fries), and, (judging from the figure, V. imbutis, Ledeb.), except that the appendages of the sepals are narrower and not ciliate at the base, and the large spur does not broaden scarcely broadens downward.

Viola palustris, Linn.; Ledeb. Fl. Ross. t. p. 247. Petropavlovski (~~Hokkaido~~ ~~dark~~ light purple, with dark veins). Bain Kantschetehne Island: a smaller-flowered form.

Viola sylvatica, Fries (var. sylvestris, Lam., Koch); var. Kantschatica, V. Canina var. Kantschatica, Ging. in Linnaea, i, p. 407.

Petropavlovski.

The specimens well accord with large-flowered forms of the V. sylvatica of Fries, except in the ~~stipules~~ broad, oblong or even ovate, and ~~laciniæ~~ toothed rather than fringed stipules. Trautvetter and Meyer notice a similar form in the Flora Chitensis.

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Droseraceæ.

Parnassia palustris, Linn. Fl. Prod.

1, p. 320; Lweb. Fl. Ross. 1, p. 262; Traub. 8^{te} Ausg.
Beyer, Fl. Cetoz. in Nordost. Sibir. p. 19; Rupr.
Fl. Samoyd. Cisural. No. 45. Coal Bay. J. Small

Parnassia Kotzebuei, Cham. & Schlecht.

in Linnæa, 1, p. 549; Lweb. Fl. Ross. l. c.; Hook.
Fl. Bor. Am. 1, p. 83, t. 28. Arakamschetschene
Island.

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Caryophyllaceae

Dianthus repens, Willd. Spec. 9, p.
681; Hook. & Arn. Bot. Beechey, p. 122; Ledeb.
Fl. Ross. I, p. 281; Scam. Bot. Novae, p. 27, t.
41. Traub. & Breyer, Fl. Chuk. in Stoddard's Libr.
p. 20. In crevices of rocks near the sea J. Small

The petals are lanceolate-toothed rather
than crenato; otherwise the numerous fine speci-
mens accord well with Seemann's figure. The
calyxine bracts are more commonly shorter than
longer than the calyx.

Silene acaulis, Linn.; Ledeb. Fl. Ross.
I, p. 303; Hook. Fl. Bor.-Am. I, p. 87; Rupr. Fl.
Samjw. Ossral. No. 50. Stony hills, Brakandeh-
etshem Island.

Silene paniculata, Ledeb. Fl. Ross. I.
p. 306.

var. uniflora; foliis angustissimis, radicale-
bus linearis-pustulatis. Alakamitchene Island,
also on table-lands at Coal Bay, J. Small.

Densely cespitose. The flowering stem, 3 or 4
inches high from thick and tufted caudexes, slender,
glabrous, as is the whole plant. Radical

and lower caudine leaves about an inch long, the dilated upper portion or blade little over a line in breadth; the one or two upper caudine pairs 3 or 4 lines long, subulate or filiform from a dilated base, sicklelike, villosociliate. Peduncles about half an inch long, erect. Calyx vesiculae-inflated, broadly campanulate, 10-nerved, not reticulated, 7 or 8 line, long; the teeth uniformly broadly ovate and rounded. Petals light purple. Their claws dilatiform, glabrous, acuminate-dilated at the summit, bearing a very small two-parted crown; lamina deeply obcordate, 4 lines long, two-cleft rather than two-parted, the lobes obtuse, entire. The flowers of this hardzone plant are considerably larger than in *S. lugida*, the leaves much narrower. The stamens and claws of the petals are glabrous, &c. Our specimen agrees with Gedebou's description of *S. panicifolia* in all respects except in the points indicated. At the same time, they so nearly approach the character of his *S. stenophylla*, as to render it probable that it is no more than a variety of the present species with a rather narrower calyx entire petals, &c.

This is doubtless var ^{*graminifolia* Oph.} *stenophylla* of Regel. H. G. Radde to which species, to which are reduced. *S. viscidulus* Horren. *S. graminifolia* Regel. *S. stenophylla*, *panicifolia*, *turgida*, *graminifolia* Schkuhr in Gedeb. Pl. Ross. also *S. panicosa*, *umbrosa*, *tehuus*, *obsoleta*, *chamaemeloides*.

Silene inflata, Sm.; Ledeb. Fl. Ross.
l.c.; Hook. Fl. Bon-Tam, I. p. 90; Traub. and
Meyen, Fil. Oehot. in Flora Siberica. Silir. p. 20.
Cyan, J. Small.

A tall and large-leaved state of the species,

Silene procumbens, Murr. Comm.
Ges. 7, t. 2; Ledeb. l.c. Fabri, Baed.
J. Small

S. procumbens Murr var?

Silene Ochotensis, (sp. nov.);
cespitosa, tenuiter puberula; caulis
e canaliculae multicipite plurimi spiculatis
gracillimis laxis ad apicem usque folia-
tis unifloris; foliis conformatibus mem-
branaceis linearibus basi subattenuatis; sum-
mis pedunculum florae nutante demidio
breviorum bis superantibus; calyx cylin-
dricus campanulatus 10-nervi, dentibus
ovatis obtusiusculis; petalis fanea coron-
atis, lamina obovata retusa vel emar-
ginata, unguibus glaberrimi. Hillsdis.

J. Small

A well marked species with the foliage
nearly that of a Stellaria or Moenchuria,
the habit and character somewhat intermediate

between the sections *Bihenantha* & *Rupifraga* and *Heliosperma*; the capsule and seeds unknown. Cauline leaves 4 or 5 pairs rather glaucous, uniform, about an inch long and a line and a half broad, sessile by somewhat connate bases; the radical similar but tapering into a petiole. Calyx 5 or nearly 6 lines long, thin & more or less irregular not reticulated between the nerves. Petals pink; the lamina 3 or 4 lines long. Stipe not half the length of the oblong-linear and completely one-celled ovary.

Silene repens, Pustov in Pers. Syn.
1, p. 300; Ledeb. Fl. Ross. 1, p. 308, & Id. Fl.
Poss. t. 425; Trautv. Fl. Tamyr. in Nied.
p. 21. from Bayam Gla Bay. J. Small.

According to Mr. Small, the collector, the calyx is purple and the petals yellowish-white. The latter, it may be remarked, have barely any trace of the crown; in other respects the specimen accord with the Siberian plant.

Melandrium apetalum, Fenzl. in Griseb.
Fl. Ross. 1, p. 326; Trautv. Fl. Tamyr. in Nied.
and Sib. p. 53. *Lychmis apetala*, Linn. sp.
326; G. Prod. 1, p. 386. Arakansechchen Island

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Sagina Gunnai, Pustj; Leibl., Fl.

Ross. I, p. 339; Rupr. Fl. Samoyed. Cisural.

No. 57. Spyngula saginoides, Linn. Sp. 631;
Fl. Prov. I, p. 344. Arakamtschetsche Island

Alosia verna, Barth. Leibl. Fl. Ross.

I, p. 347; Trautv. am Ussuri, Fl. Ussuri, in Nib-
den. Sib. p. 21; Rupr. Fl. Samoyed. Cisural.

No. 58. Arenaria costata & Arenaria verna,
Auct. Petropavlovski and Arakamtschetsche
Island.

Four rather distinct varieties occur
in the collection; var. glacialis, sepals very
strongly nerved; pedicels glandular-pubescent;
stems one-flowered: var. Kirey, very smooth;
stems one-flowered; another form larger and
more diffused of the same variety, and a more
leafy, very pubescent, slender form with the stems
from one to four-flowered and the leaves very
strongly three-nerved.

Alosia macrocarpa, Gensl; Leibl.

Fl. Ross. I, p. 353; Trautv. Fl. Samoyed. in Nibden.
Sib. p. 51. Arenaria macrocarpa, Auct.

Cool Bay, J. Small. Arakamtschetsche Island?

Ulmus arctica, Griseb. Lweb. Fl. Ross.
c.e.; Frantz. Fl. Kamtsch. Middend. Sibir.
p. 51. Urenaria arctica, Griseb. Arakamtchetchene Island.

A densely cespitose form has long slender very leafy branches; leaves broad, strongly lyrate-falcate, distinctly nerved, beset especially at base with a few long cilia: a second similar to this has much narrower smooth leaves and no sterile branches; a third has the sepals obovate very obtuse dark red; pedicels elongated; all have one-flowered stems.

Honkenya peploides, Ehrh.; Lweb.
Fl. Ross. I, p. 358; Frantz & Meyer, Fl. Cehot.
in Middend. Sibir. p. 21. Urenaria peploides,
Griseb. Iwanai, W. coast of Japan, J. Small.
Arakamtchetchene Island.

Merckia physodes, Fisch.; Hork.
Fl. Bor.-Am. I, p. 103; Torn & Gray, Fl. I. p. 176
Urenaria physodes, Griseb. Dc. Podo. I, p. 413.
Arakamtchetchene Island.

Hennig

Noehringia lateriflora, Fenzl; Ledeb.

Fl. Ross. 1, p. 371; Trautv. & Meyer in Medew.

Sibin Fl. Ochot. p. 22; Rupr. Fl. Samoy.

Cesural. No. 60. Arenaria lateriflora, G.

Poirr. 1, p. 412; et Cuncte Arakamtschetsche
Island.

Stellaria crispa, Cham. & Schlecht.

in Linnæa 1, p. 57; Hook. Fl. Bor.-Am. 1, p. 97;

Ledeb. Fl. Ross. 1, p. 382; Journ. & Gray, Fl. 1, p. 186.

Fabius Bay, J. Small.

Stellaria gracilis, Richardson in Frankl.

Journ. Ed. 2, Apr. p. 17; Hook. Fl. Bor.-Am. 1,
p. 97. Arakamtschetsche Is. land.

The flowers are on long, slender peduncles,
often in the bifurcation of still longer leafy sterile
branches, which are terminated by a bulb, (or
transformed flower-bud?)

Stellaria longipes, Goldie; Ledeb. Fl.
Ross. 1, p. 386. Arakamtschetsche Island.

There are two pretty well-marked varieties;
one with linear leaves and single-flowered stems,
pedicels short; the other with broader leaves, & stems
bearing from 1 to 4 flowers on long peduncles.

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Sellaria floridana, Fisch., Ledeb. Fl. Ross.
1, p. 385; Fl. Prod. 1, p. 399. Sellaria Fischeriana,
Ser. in Fl. Prod. L. e. Cow Bay, J. Small.

Sellaria lusmijasa, Rosk. L.; Ledeb. Fl.
Ross. 1, p. 408; Truhn. & Meyer, Fl. Cekot. p. 23
in Middende Silix; Rupr. Fl. Samoyd. Cisural.
No. 61. Arakanstschetchev Island.

Cerastium vulgatum, Linn.; Ledeb.
Fl. Ross. 1, p. 408; Rupr. Fl. Samoyd. Cisural.
No. 72. Arakanstschetchev Island.

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Gesneraceæ.

Gernnum erianthum, D. C. Prodr. 1, p.

641; Hook. & Arn. Bot. Beechey, p. 113; Godb. Fl.
Ross. 1, p. 464; Griseb. & Meyer. Fl. Cecoz.
p. 25, in Middendorff. Siber.

Coul Bay & Yansh Gulf, J. Small. Peter-
pavlovskii.

Portulacaceæ.

Claytonia acutifolia, Willd.; Ledeb. H.

Ross. 2, p. 147; Fl. Prod. 3, p. 361. C. acutæa

Baumg. Fl. Taimyr. p. 46 in Noddeus. Sib'.

Coral Bay, J. Small. Arakamtschekene
Island.

The specimens from the latter locality
show all intermediate forms of leaves, from those
that are linear, to such as are broad lanceolate;
with the latter the plants from the former locality
also agree. The caudex varies from the thickness
of a goosequill to that of the thumb.

Montia fontana, Linn.; Ledeb. H.

Ross. 2, p. 152; Fl. Prod. 3, p. 362.

Arakamtschekene Island.

Zygaminosae.

Phaea australis, Linn.; Ledb. Fl. Ross.

1, p. 577; Dc. Prod. 2, p. 274.
Arakamtschatchine Island.

The specimens agree quite well with authentic specimens except that the leaflets are pretty generally linear-lanceolate and more or less hairy.

Oxytropis Montana, Turcz. Ledb. Fl.

Ross. 1, p. 589; C. Imp. phylla, Cham. in Guinea,
6, p. 546; Dc. Prod. 2, p. 278. Arakamtschatchine
Island.

Oxytropis campestris, Dc.; Ledb. Fl.

Ross. 1, p. 590; Dc. Prod. 2, p. 278 exst. var. 3, 5, f.
Fabius Bay, J. Small. Arakamtschatchine
Island

We have from the latter locality two forms, of which one has very small leaflets, revolute on the margin, and sparsely pubescent, flowers purple; the other has larger, more pubescent leaflets and yellow flowers. The specimens from Fabius Bay are larger every way, very striking, silky pubescent, with yellow flowers and densely black pubescent legumes.

(33*) after Cogniaux

Astragalus alpinus, Linn.; Ledeb.

Pl. Ross. I, p. 501; Braun & Meyer, Pl. Cebot, p. 27

in Middew. Siberia; Rupr. Pl. Samoja. Cisural. 10. 81.

Phaea astragalina, Hooker Ann. Bot. Burchey, p. 122

Flowers purple. On stony hills, Arakanutchene Island.

Phaea abrujivorm Hook. fl. Bor. Am. I, p.

143, t. 54. Torn. & Gr. Pl. N. Amer. p. 346

Arakanutchene Island. On sandy flats. Our specimens are recorded as having yellow flowers white in Torn. & Gr., they are said to be white tinged with blue. The spike are fewer flowered & the leaflets rarely half as much long

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~~Oxytropis Wahlenbergii~~ D.G.

Oxytropis Wahlenbergii D.G. Astr. p. 55, No 3, Prod.

O. archieae R.Br. Ann. Parry's Voy. p. 278? Ab. Prod. 2, p. 267?

On stony hills. Arakan & the Shan Islands

Our specimens in size & pubescence &c compare well with the smaller N. Asiatic forms: in the black hairs of the calyx & the pod with those from Northern America but are much less caudate. The margins of the leaflets are remarkably broad & revolute. The peduncles are densely pubescent slightly willow. H. purple or violet

Oxytropis Mertensiana Trinck in Bull. de la Soc. des

Nat. & des Mus. 1840, p. 68. Ledeb. Fl. Ross. 1, p. 589. O. turgida
Schne. in Linnaea 6, p. 456 (from Pers.)

Arakan & Sikkim I. on stony hills H. violet

Oxytropis lemnoides D.G. Astr. p. 59, No. 10; Prod.

2, p. 278. Ledeb. Fl. Ross. 1, p. 590. O. sordida Ab. Prod. 2, p. 276

Shrubs of the Okhotsk See J. Small. Arakan & Sikkim I. The specimens exactly correspond to northern forms both American & Asiatic

Oxytropis

Oxytropis borealis, Hc. Lestev. p. 55,
No. 3; & Prod. 2, p. 276, Tarkh. Fl. Ross. I. p. 593.
O. arctica, Hook. & Arn. Bot. Benth., p. 122. &
Hook. Fl. Bon.-Am. I, p. 146, ex Lindl.
 Arakamtschekine Island.

Pisum maritimum, Linn.; Lindl. Fl.
Ross. I, p. 661; Dc. Prod. 2, p. 368; Frank. Eibey
Fl. Cetoch. p. 27 in Middend. Sibir. Arakamtsche-
 kine Island. Peso-pantovoske

Besides the ordinary state a very small
 was collected by Purser & W. B. Bogg. This has the
 leaves less than half an inch long, oval, very ob-
 tusely mucronate or apiculate, rather incon-
 spicuously veined, and minutely pubescent.
 The bracts are obliquely subcordate, as large as
 the leaflets and without serratures.

Lathyrus palustris, Linn.; Dc. Prod. 2, p. 371;
Lindl. Fl. Ross. I, p. 686; Frank. Eibey, Fl. Cetoch.
p. 29 in Middend. Sibir. (Arakamtschekine Island).

Hedysarum boreale, Nutt.; Dc. Prod.
I, p. 343; Hook. Fl. Bon.-Am. I, p. 155; Gray.
Fl. I, p. 456. Coal Bay, J. Small. Arakam-
 tschekine Island.

Rosaceæ.

Spiraea betulifolia, Pall.; Ledeb. Fl.
Ross. 2, p. 14; Fl. Prod. 2, p. 544; Trautv. &
Mayer, Fl. Cehot. p. 15 in Middlew. Sibir.
Ayan, J. Small. Arakamtschetschen Island.

Spiraea Aruncus, Linn.; Ledeb. Fl.
Ross. 2, p. 16; Fl. Prod. 2, p. 545; Trautv. &
Mayer, Fl. Cehot. l.c. Petropavlovski.

Dryas octopetala, Linn.; Ledeb. Fl.
Ross. 2, p. 20; Fl. Prod. 2, p. 549; Torn. & Gray
Fl. L., p. 420; Trautv. Fl. Tamyr. p. 47 in
Middlew. Sibir. Arakamtschetschen Island.

A form with small leaves, not narrowed
but tunecat, or even subcordate, at the base.

Dryas integrifolia, Nahl; Ledeb. Fl.
Ross. l.c.; Hook. Fl. Bor.-Am. 1, p. 174; Torn. &
Gray, Fl. l.c. Arakamtschetschen Island.

The short, tufted stems are very
densely clothed with leaves. The peduncles
are from one-half inch to one and a half inches in
length, and the flowers, when fresh, were yellow.

Spiraea sp. in Mill.

Sanguisorba officinalis, Linnae.; Ledeb.
H. Ross. 2, p. 27; Trautv. & Meyer, H. Ochot.
p. 35. Ayan; in marshy valleys.

Sanguisorba tenuifolia, Lisch.; DC.
Prodr. 2, p. 593; Ledeb. t.c.; Trautv. & Meyer,
t.c. Ayan.

Flowers pink and nearly white.
A small state of the species, with ~~broad~~
leaves ^{broad} than usual, truncate or subcor-
date at the base, but nearly semile, the
calyx nearly glabrous.

Gemm striatum, vitij, Ledeb., H. Ross.
2, p. 22; Trautv. & Beyer, Fl. Ural. p. 32 in
Middlew. Sibir. Petropanovski.

Sierlesia glacialis, R. Br.; Cham. &
Schlecht. in Ginnala 2, p. 5; Ledeb., H. Ross. 2,
p. 25; Hook., Fl. Bor.-Am. 1, p. 176; Trautv.
H. Tamm, p. 47 in Middlew. Sibir.
Arakamschikene Island.

Sierlesia Rossii, R. Br.; Cham. &
Schlecht. in Ginnala 2, p. 5; Hook., Fl. Bor.-Am.
1, p. 176. Gemm Rossii, Dc. Prud. 2, p. 553; Torn.
& Gray, Fl. 4, p. 424. Arakamschikene Island.

Sierlesia ammonoides Willd. Hook., Fl. Bor.
Am. 1, p. 176. Ledeb., Fl. Ross. 2, p. 24. Torn. & Gray, Fl.
N. Am. 1, p. 423

Shores of the Okhotsk Sea J. Small

Potentilla Torvegina, Linn.; Gideb. H.
Ross. 2, p. 36; Gle. Prod. 2, p. 573; Trautv. au
Meyer, Hl. Ceph., in ~~Ibidem~~ Sib., p. 32.
Ayan, J. Small. Petersenovski.

(Rev. Bot. p. 44, t. 15)

Potentilla stolonifera, Lehm.; Gideb
Hl. Ross. 2, p. 38; ~~P. fragarioides~~, Charn. & Schlecht.
in Linnaea, 2, p. 25; Hook. & Arn. Bot. Beechey,
p. 113; ^{non Linn.} Petersenovski.

Potentilla austera, Linn.; Gideb. H.
Ross. 2, p. 44; Gle. Prod. 2, p. 582; Trautv. &
Meyer, Hl. Ceph., p. 33 in ~~Ibidem Sib.~~; Rupr.
Hl. Tomog. & Cisural. No. 91. Arakamtsche-
tchene Island.

Potentilla nivea, Linn.; Gideb. H.
Ross. 2, p. 57; Gle. Prod. 2, p. 571; Lehm. Rev.
Potent. p. 165. Arakamtsche-tchene Island.

The larger specimens are at least 1
nun inches high; the stems are from three to
five, & have from one to five flowers. The largest
leaflets are but little more than half an inch long.
A much smaller variety has the 1-2 flowered stems 1-3
inches high, and the leaflets are hardly half as large
as those of the former, with fewer and deeper serra-
tions.

Potentilla villosa, Pall. in Lamkst. herb. ex

Pursh. Fl. Bor.-Am. 1, p. 353; DC. Prodr. 2, p. 573;
Lindb. Fl. Ross. 2, p. 58; Hook. Fl. Bor.-Am. 1, p.
194; Torn. & Gray Fl. 1, p. 442; Lehm. Potent. p.
166, t. 16. P. villosa, var. gracilis, Hook. Am. Bot.
Beechey, p. 123. Yamsk Gulf & Fabius Island,
J. Small. Arakanschetschen Island.

The variety was obtained at the first locality,
the ordinary forms at the others.

Potentilla biflora, Willd.; Lindb. Fl. Ross.
2, p. 61; DC. Prodr. 2, 586; Hook. Fl. Bor.-Am. 1, p. 195;
Torn. & Gray, l.c. Arakanschetschen Island

Potentilla fruticosa, Linn.; Lindb. Fl.
Ross. 2, p. 61; DC. Prodr. 2, p. 579; Torn. & Gray, Fl. l.
c. Coal Bay & Ayan, J. Small. Arakanschetschen
Island

Potentilla elegans, Cham. & Schlecht. in
Linnaea, 2, p. 22; Lindb. Fl. Ross. 2, p. 56.
Arakanschetschen Island.

Rubus arcticus, Linn.; DC. Prodr. 2,
p. 565; Lindb. Fl. Ross. 2, p. 70; Hook. Fl. Bor.-Am.
1, p. 192; Torn. & Gray, Fl. 1, p. 451. Coal Bay &
Fabius Bay, J. Small. Arakanschetschen Island.

(39)

Rubus Chamænorus, Linn.; Ledeb. Fl.

Ross., 2, p. 71; Dle. Prod. 2, p. 565; Hook. Fl. Bor.

Am. l. c.; Torr. & Gray, Fl. l. c.

Arakanschetsche Island.

W. N. ^{Inde} cinnamomea? var. mayalis?

Rosa alpina, Linn.; Ledeb. Fl. Ross.

l. c.; Dle. Prod. l. c. R. ciliolata, ex Traub.

& Meyer, Fl. Bor. in Middlew. Siber. p. 36

Ayan, J. Small.

Rosa cinnamomea, Linn. Ledeb. Fl.

Ross. 2, p. 76; Dle. Prod. 2, p. 605; Traub. &

Meyer, Fl. Cehot. p. 36 in Middlew. Siber.

Petruskovskii.

Pyrus sambucifolia, Cham. & Schlecht.

in Linnæa, 2, p. 36; Ledeb. Fl. Ross. 2, p. 99; Hook.

& Am. Bot. Beechey, p. 114; Torr. & Gray, Fl. 1, p.

472. Coal Bay, Ayan, J. Small. ~~Arakanschetsche Island.~~

Arakanschetsche Island.

(40)

Omagraeclad.

Epilobium angustifolium, Linn. Hook.

Fl. Bor.-Am. 1, p. 205; Ledeb. Fl. Ross. 2, p. 105;
Trautv. & Meyer, Fl. Cehot. p. 27 in Middend. Sibir.
Rupr. Fl. Samoj. censur. No III. Cape Roman-
off, off. the coast of Yesso & Janusk Gulf, J. Small.

Epilobium lasiophyllum, Linn.; Ledeb.

Fl. Ross. 2, p. 106; Fl. Prodri. 3, p. 40; Hook. Fl.
Bor.-Am. 1, p. 295; Torr. & Gray. Fl. 1, p. 487;
Trautv. & Meyer, Fl. Cehot. p. 38 in Middend. Sibir.
Coal Bay, J. Small. Arukamtschetschensk
Island.

Epilobium palustre, Linn.; Fl. Prodri.

3, p. 43; Ledeb. Fl. Ross. l. c.; Trautv. & Meyer, l. c.
Coal Bay, J. Small.

Epilobium origanifolium, Lam. Fl. Prodri.

3, p. 41; Ledeb. Fl. Ross. 2, p. 111; Hook. Fl. Bor.-
Am. 1, p. 206. A few specimens were mixed with
E. palustre.

Epilobium affine, Linn. Bong.; Ledeb.

Fl. Ross. 2, p. 110. Petropavlovsk.

(41)

Epilobium alpinum, Linn.; Ledeb.
Fil. Ross. 1. e.; Fl. Prod. 3, p. 41; Hook. Fl.
Bor.-Am. 1, p. 205; Trautv. Fl. Taimyr. p. 47.
in. Modem. Sibir.; Rupr. Fl. Samoyd. Cis-
ural. No. 108. Arakanschetschen Island.

Hippocratea montana, Ledeb. in Reichenb.
Ge. Bot. 1, p. 71, t. 86. f. 181; Fl. Prod. 3, p. 71;
Hook. Fl. Bor.-Am. 1, p. 218; Torr. & Gray, Fl.
U.S. 531. Margin of pools, Arakanschetschen
Island.

Callitrichis iheringi, Linn. Fl. Prod.
3, p. 70; Hook. Fl. Bor.-Am. 1, p. 217; Rupr. Fl.
Samoyd. Cisural. No. 112. Sandy flats near
the sea side, Arakanschetschen Island.

Grossulaceæ.

Ribes nigrum, Linn.; Ledeb. Fl.
Ross. 2. p. 200. N. Dikuscha Fisch.?
Trautv. & Meyer. Fl. Ocht.?
Mantov.
Blanc. in fruit.

(417)

Grassalaceae.

Winetia spinosa, Dc. Prod. 3, p. 402;
Lindl. Fl. Ross. 2, p. 174; Trautv. & Meyer, Fl. Cehot.,
p. 38 in Middendorffia Sibir. Gl. yellowish-green. On rocks
near the sea side, Shantar Island. J. Small

Sedum elongatum, Lindl. Lit. 2, p. 193 &
Fl. Ross. 2, p. 178; Hooker's Gen. Bot. Beechey, p. 114. 1232
Rhodiola elongata, Trautv. & Meyer, Fl. Cehot. l. c.
Coal Bay, J. Small. Ussakowskij Island.

Sedum Rhodiola, Dc. Prod. 3, p. 401; Lindl.
Fl. Ross. 2, p. 179; Trautv. Fl. Taimyr, p. 46 in Middendorffia
Sibir. Rhodiola rosea, Rupr. Fl. Samoyd. Cisural. Fo. 118.
Coal Bay, Western Kamchatka, J. Small. H. purple.

Sedum cyaneum, Rudolphi; Fl. Prod. 3, p.
404; Trautv. & Meyer, Fl. Cehot. l. c.; Coal Bay Lindl.
Fl. Ross. 2, p. 182. Coal Bay, Oymansk Gulf, J. Small

Sedum hispanicum, Linn.; Lindl. Fl. Ross. l. c. in
Dc. Prod. 3, p. 402; Trautv. & Meyer, l. c. Fl. yellow
Mountain sides, Ayan. J. Small

(41^{xx}) after S. Eschholzii

Saxifraga herbacea; Pisot.; Lind., H.
Ross., 2, p. 208; Fl. Prod. 4, p. 24; Cham. in Tunneac
6, p. 556. Flowers white. Coal Bay, in ravines.

J. Small

The plants are too young to show very clearly the
inflation of the capsules and the calyx is quite smooth;
otherwise they agree well with the description.

(42)

Saxifragaceæ.

Saxifraga oppositifolia, Linn.; Ledeb.

Fl. Ross., 2, p. 204; Fl. Prod. 4, p. 18; Don, Saxifr. p. 400; Torn. & Gray, Fl. 1, p. 563; Hook. Fl. Bor. Am. 1, p. 242. Arakanshetschene Island.

Saxifraga bronchialis, Linn.; Ledeb.

Fl. Ross., 2, p. 207; Fl. Prod. 4, p. 47; Traub. Fl. Taimyr, p. 41 in Abidem. Silir; Hook. Fl. Bor. Am. 1, p. 564. Arakanshetschene Island.

The trigonus form of the leaves is not as described by Don is not observable in our specimen nor is it noticed in other authors.

Saxifraga nitida, Schreb.; Ledeb. Fl. Ross.

Fl. Prod. 4, p. 22. S. cherleroides, Don, Saxifr. p. 382; S. pseudo-bunseriana, Torn. & Gray, Fl. 1, p. 563; Yamak Gulf, J. Small

Saxifraga Osbeckoltzii, Stevnb.; Ledeb.

Fl. Ross., 2, p. 208; Fl. Prod. 4, p. 18; Hook. Fl. Bor. Am. 1, p. 243; Torn. & Gray, Fl. 1, p. 564. Arakanshetschene Island.

Saxifraga Hirculus, Linn.; Ledeb.

Fl. Ross., 2, p. 210; Fl. Prod. 4, p. 44; Hook. Fl.

(43)

Bor.-Ann. 1, p. 992; Gravw. Hl. Tammr. Hl.
p. 43 in Bidderd. Sil in Coal Bay, J. Small
Arakamchelkene Island.

Saxifraga stellata, Linn.; Lidde.

Hl. Ross. 2, p. 211; Hl. Prov. 4, p. 40; Hook. Hl.
Bor.-Ann. 1, p. 250; Gravw. Hl. Tammr. p. 43
in Bidderd. Sil in; Don, Say ijr. p. 356.

Coal Bay, J. Small. Arakamchelkene Island

The specimens all belong to the var. cornuta, Poir.

Saxifraga Davurica, Pall.; Lidde, Hl.

Ross. 2, p. 212; Hook. Hl. Bor.-Ann. 1, p. 250; Hl.
Prov. 4, p. 38; Bonn & Gray, Hl. 1, p. 569; Don,
Say ijr. p. 388. Coal Bay, J. Small. Arakam-
chelkene Island

Though the plants from the above localities
are apparently quite unlike they seem to be included
in the description and annexed observation of
Liddebowry, i.e. If, as is very probable they are
only one very variable species they may as well
embrace S. pauciflora, Stev., S. neglecta, Bray,
and S. globellifolia, R. Brown, as they certainly do,
if we may judge from the figure & description S.
reflexa, Hook. The specimens from Western Kamt-
chatka have the inflorescence corymbose-paucialate,
the calyx erect, and the ovaries short; those from

Bekuny's S. v. v., on the other hand, have the flowers truly racemosous on rather long, slightly spreading pedicels; the calyx strongly reflexed, and the ovaries long; the petals of the former are white, of the latter dark red. In height, in the form & arrangement of the leaves, and in the degree of pubescence, both sets of specimens, very well agree.

Saxifraga nivalis, Linn.; H. Prod. 4, p.
38; Turb. Fl. Ross., 2, p. 213; Hook. Fl. Bor.-Am.
1, p. 248; Granti. Fl. Taimyr. p. 43 in Middend.
Sibir.; Don, Saxifr. p. 387.
Arakamwhetchene Island.

Saxifraga sibiricaefolia Waldst. & Kit.;
Fl. Ross., 2, p. 214; H. Prod. 4, p. 39; Hook. Fl. Bor.
Am. 1, p. 249; Granti. Fl. Taimyr. p. 44 in
Middend. Sibir.; Don, Saxifr. p. 383.
Arakamwhetchene Island. X.

Petals dark crimson, anthers orange

Saxifraga pumilata, Linn.; Hook. Fl.
Bor.-Am. 1, p. 251; Turb. Fl. Ross., 2, p. 215.
Coral Bay, J. Small. Petropavlovskii. Arakam-
whetchene Island.

X

To this doubtless belong *S. astivalis*, Fisch., as well as *S. Nelsoniana* & *S. arguta*, Don; but probably not *S. heterantha*, Hook., (*S. astivalis*, var. *S. Tom. & Gray*, Pl. 1, p. 568) which is well distinguished by Ledebour. Small specimens are a large part of those from Behring's Straits, as well as those from Petropavlovski, attain a height of a foot & even more, with leaves two inches in width, on petioles three inches long. The others from Behring's Straits are only from two to five inches high, with leaves hardly half an inch wide, on petioles half an inch to an inch in length. The larger form has the filaments dilated, while those of the smaller are subulate.

Saxifraga nudicaulis, Don, Sav. n. p. 366;
Zedk. Fl. Ross., 2, p. 216; Dc. Prod., 4, p. 37; Hook.,
Fl. Bering-Am., 1, p. 253; Torr. & Gray, Pl. 1, p. 568,
Fabius Bay, J. Small, Arakauuketehene Island.

The somewhat orbicular-reniform leaves are mostly less than half an inch broad, not palmate, but only coarsely dentately 5-9-lobed to about one third of their length. The petals are very light pink. The plants vary from two to seven inches in height.

(46)

Saxifraga cernua, Linn., Lidob. Pl.
Russ. 2, p. 219; St. Prod. 4, p. 36; Hook. Fl. Bor-
Am. 1, p. 245; Traub. Fl. Taimyr. p. 44 in
Nordens. Sibir.; Torn. & Gray, Fl. 1, p. 573.
Heracl Island, Offices of the Vincennes. Arakant-
chetchen Island.

The plants from Heracl Island are sparingly
bulbyrous in the axils and have the lower orbicular
and caulin subreniform leaves with fewer and
broader rounded or obtuse very short teeth or
lobes. Another form has the axillary bulbils
producing abundantly little orbicular or slightly
three-lobed leaves.

Saxifraga bracteata, Don, Sax. gr. p. 367:
Caulibus ex radice fibroso ad scandentibus
viscidovillosis basi saepe perulae-bulbyris,
usque ad apicem foliatis; foliis conformatibus
membranaceis reniformibus, inciso(5-9)
lobatis areolatim ~~punctatis~~ punctatis,
summis breviter inferioribus longissime
petiolatis; floribus 3-5 in axillis foliorum
summorum vel bractearum solitariis compactis
breviter seu brevissime pedunculatis; petalis
(albis) obovatis simplicissime triplinerviis
calycis laevioris ovatis obtusis longioribus
capsula semi-supera apice emarginata

biloba, *Stigmatisma cooperiatus sessili-*
bis. Yunnan-ghi an isles near Urahama
 Ichishima Island

This is no doubt Don's *S. bracteata*,
 founded on a specimen gathered by Herck,
 somewhere in the Eastern Siberia and preserved
 in the herbarium of Pallas, but which has hitherto
 otherwise remained wholly unknown to bot-
 anists. Our specimens are all in fruit, but
 with the stamens & the withered petals often
 remaining. The flowers are mostly shorter
 than the leaves which subtend them and
 rather large; the capsule being 3 or 4 lines long.
 A peculiarity unnoticed by Don is found in the
 large scaly gemmae, either sessile or on
 short succelli at the base of the stem. These
 are made up of broad *plagianthaceous*
 scales, which are a sort of dilated stipules,
 as many of them are continued from a notch
 at the summit into a short petiole, bearing
 a diminutive blade. The lower caulin
 petioles are more or less scarious, dilated
 at the base. In these and some other respects
 the plant is evidently a near relative of *S.*
vaginalis, *Yucca*, in Ledeb. Fl. Ross. 2, p. 220.

(48)

Saxifraga similans, Linn.; Ledeb. Fl.
Ross. 2, p. 224; Hb. Prod. 4, p. 36; Hook. Fl.
Bor.-Am. 1, p. 246; Torn. & Gray, Fl. 1, p.
574; Trautn. Fl. Fauny & fl. 45 in Holden,
Sibir. Herald Island, off coast of the Vincennes
Arakanstschetchen Island.

The plant from the former locality has
larger leaves and flowers and is more diffuse in
habit as if it grew in the shade; while the others
are rigidly erect with very many stems from
the caudex, smaller leaves, & sometimes smaller
flowers. Stems of the former with one, of the latter
with from one to three flowers.

Saxifraga selenopora, Hemb.; Ledeb.
Fl. Ross. 2, p. 224; Hook. Fl. Bor.-Am. 1, p.
246; Torn. & Gray Fl. 1, p. 566. S. hypnoides Z.
condensata, Seringe in Hb. Prod. 4, p. 31?
Arakanstschetchen Island.

Chrysosplenium Keantschaticum, Schlecht. pat.
in Herb. Willd.; Fisch. in Hb. Prod. 4, p. 48.
(vide Jap. Coll.) Petropanovski.

Chrysosplenium alternifolium, Linn.;
Ledeb. Fl. Ross. 2, p. 226; Hb. Prod. 4, p. 48

(49)

Yunnan, Hsü Yüning, p. 45 in Boddend. Silir,
Herald Island, Officer of the viceroy. West
coast of Kamtschatka, J. Small. Ussakants-
chetsene Island.

Small plant has the caudine leave,
somewhat deeply 3-5 forked or lobed and throws
out from the caudex stoloniferous branches.
The specimen from Behring's Straits are
erect, those from Herald Island spreading,
and the stems & petioles are densely villose
pubescent.

Ambelliaceae.

Copropodium alpestre, Lideb. Fl. Alt. I, p. 354;
Fl. Ross. 2, p. 248; Ic. Pl. Ross. t. 7, Ayan, J. Small

The plant is only in flower & hence too young to be determined with certainty, but it accords well with the detailed description in Ledebour's Flora Altaica and with the figure in the Icones Florae Rossicae of the same author.

Bupleurum ranunculoides, Linn.; Lideb. Fl.
Ross. 2, p. 265; Hook. Fl. Bor.-Am. I, p. 263; Fl. Prod.
4, p. 131; Torr. & Gray, Fl. I, p. 609. Coal Bay, J. Small

Sigillaria Scoticum, Linn.; Lideb. Fl.
Ross. 2, p. 286; Fl. Prod. 4, p. 157; Hook. & Arn. Bot.
Beechey, p. 115, 125. Yamal Gulf, J. Small, Petro-
paulski.

Conosilium Fischeri, Nimmer & Grubowksi;
Ledebour Fl. Ross. 2, p. 290; Fl. Prod. 4, p. 164;
Hook. & Arn. Bot. Beechey, p. 124; Hook. Fl. Bor.-Am.
I, p. 266. Fabius Bay, J. Small.

Archangelia Gmelini; Fl. Prod. 4, p. 170
Hook. Fl. Bor.-Am. I, p. 267; Torr. & Gray, Fl. I, p. 621.
Galeopleuron Gmelini Lideb. Fl. Ross. 2, p. 361.

(51)
Phrynobatrachus sayabilis, Turez. ~~H.~~ Frank De Meyer,
M. Gehrt, p. 44 in Middendorff, Siberia. Grakanurki-
Ichen Island.

Cornaceæ.

Cornus suecica, Linn.; Lidb. H. Ross.

2^o p. 377; G. Prod. 4, p. 274; Torn. Olgyay, H. I.,
p. 653; Hook. Fl. Bon-Am. I, p. 227; Trautv. &
Meyer, Fl. Cebot, p. 45, in Boddend. Sib. in
Coal Bay, J. Small. Petropanavoski, Arakanschek
^(then 2 sp.).

The specimens from Petropanavoski attain,
in some instances, the height of seven inches, with
four or five pairs of leaves, the upper ones often having
small axillary branches; those from the other places are
only from two to four inches high and unbranched.

Cornus canadensis, Linn.; Lidb. Fl.

Ross. 2^o p. 378; G. Prod. 4, p. 274; Hook. Fl. Bon-Am.
I, p. 227; Olgyay, J. Meyer, Fl. Cebot, p. 45, in Boddend. Sib. in
Trautv. & Meyer, J. Small.

Cuprifoliaceae.

Sambucus racemosa, Linn.; Ledb. Fl. Ross., 2, p. 383; Fl. Prod. 4, p. 322; Hook. Fl. Amur-Am. 1, p. 279; Trautv. & Meyer, Fl. Cehot. p. 46, in Stoddard, Siber. Petropavlovsk.

Lonicera nigra, Linn.; Ledb. Fl. Ross., 2, p. 389; Fl. Prod. 4, p. 335; Hook. & Arn. Bot. Beechey, p. 115. Petropavlovski.

The specimen very uniformly show the flowers as long as the pedicels, and pretty well grown pair with its pedicels not more than one third as long as the leaves.

Lonicera aculeata, Linn.; Ledb. Fl. Ross., 2, p. 390; Fl. Prod. 4, p. 337; Trautv. & Meyer, Fl. Cehot. l.c.; Hook. & Arn. Bot. Beechey, p. 115. Petropavlovski.

Linnan borealis, Grunow; Ledb. Fl. Ross., 2, p. 392; Fl. Prod. 4, p. 340; Hook. & Arn. Bot. Beechey p. 125; Trautv. & Meyer, Fl. Cehot. l.c. Felkisstopp Harbor, Je Small, Uralantschekhorne Island

The insular plants have their leaves two times and less in length and the flowers but little longer, while the leaves & flowers of those from the eastern side Okhotsk sea are more than twice the size.

Dieserilla Middendorffiana, Gray.

(Vide Japan, Coll. p. 1.) Calyptrostigma
Middendorffianum, Trautv. & Meyer, Fl.
Ochot., p. 16, t. 25, a, b. Ryan, Ochotsk
Sea. J. Small; in fruit.

~~Although the~~

We have not seen the flowers. Even if a normal state is correctly represented in the Flora Ochotensis, Dr. Gray does not hesitate to refer this plant to Dieserilla (including Weigela). The lobes of the calyx in our specimens, although sometimes united in the manner represented, are ~~very various~~
~~combined in other wise~~ as often free nearly to the base and regular, or else various and irregularly combined. Although persisting on the back of the fruit they ~~probably wither and fall~~ appear to fall off at last. Cypsile ^{Chitacea-conapogon,} ovoid-pisiform, half an inch long, abruptly narrowed into a beak of about 2 or 2½ lines in length. Seeds very numerous, oblong or lanceolate in form, the wing ~~very much~~ many times larger than the nucleus.

(53')

Rubiaceae.

Galium boreale, Linn.; Ledeb. Fl.
Russ. 2, p. 412; Gc. Prod. 4, p. 600; Trautv. &
Bayer. Fl. Cedov. p. 418 in Middle Sib. Gramk
Guly. J. Small. Petropavlovski

Galium verum, Linn.; Ledeb. Fl. Ross.
2, p. 414; Gc. Prod. 4, p. 603; Trautv. & Bayer, l. c.
Felkisoff Harbor, J. Small. Petropavlovski.

(53")

Valerianaceæ.

Valeriana capitata, Pall.; D. L. Prod. v.

Ap. p. 437; Ind. Fl. Ross. 2, p. 435; Griseb. & Olivier
Fl. Taimyr. p. 40 in Herbold. Sibir.; Rupr. Fl.
Sino-Jap. exsicc. No. 146. Ayan, J. Small.
Anakamchikhem Island.

(34)

Compositae, by A. Gray.

Nardosmia frigida, Hook. Fl. Bor.
Wurz. Mu. 1, p. 307; Ledeb. Fl. Ross. 2, p. 467.
Ternu Jussiaea frigida, Linn.

Var. corymbosa. N. corymbosa, Hook.
Lc. Jussiaea corymbosa, K. Br. in Parry,
vol. p. 269. Brakantchetchne Island,
on hill sides (Flowers light purple.)

Lessing was doubtless right in
reducing N. corymbosa to N. frigida.
The differences are merely in the degree
of notching or sinuation of the leaf, and
are of ~~the~~ no specific account. N.
dagmata is clearly but another form
of the same species, and even N. pal-
mata may not really be distinct.

Aster Sibiricus, Linn. var. subinteg-
rimus, Trautv. Fl. Progr. in Middel. Sib.
p. 166. A. Richardsonii, Gray.; DC. Prod. 5.
p. 229; Hook. l.c.; Ledeb. l.c. A. Esperber-
gensis, Nees.; DC. l.c. A. montanus, Richard., in
Frankl. Novi Ruprecht. Fl. Samoj. A. Prescottii,
Linn. fl. in DC. l.c.; Ledeb. Fl. Ross. 2, p. 476. Ara-

(35)

Kamtschacke Island, Bla Bay, Ochotsk
Sea, near lat. 60°.

The specimens from Behring Straits are simple and only 3 or 4 inches high; the others are taller and sometimes a little branched. All of them have the aspect of dwarfed states of a larger species; and Trautvetter has probably rightly referred the plant to *A. Sibiricus*.

6. 7.

Erigeron uniflorum, Linn.;
Ledeb. Fl. Ross. 2. p. 490. *E. pulchellum*
var. *Almalaschkinense*, D. C. Prodr. 5. p. 287.
Frakantchukine Island. (Rays
white or light purple.)

Erigeron elongatum, Ledeb. Fl.
Alt. 4. p. 91, Fl. Ross. 2. p. 487, & Fl.
Fl. 1. t. 31; Trautv. & Meyer. Fl. Ochot.
p. 50. Kamtsch Gulf and Agan,
Ochotsk Sea; in valleys near the sea.
(Rays purple.)

Whole plant glabrous; in culmose
puberulent-glandular. Rays purple,
rather long.

Solidago Virgaurea, Linn.; Ledeb.
Fl. Ross. 2. p. 493. — Petropavlovsk;

also Coal Bay, west coast of Kamtchatka. Agan, Ochotsk.

Var. Mulliradiata, Torr. & Gray, Fl. 2, p. 207. S. mulliradiata, sit. S. Virginica var. arelica, Ledeb. l.c., Amakantchelchene Island.

The larger forms, ^{some of them} nearly approach S. thyrsoides and have equally glabrous achenia. The higher northern specimens all belong to the var. mulliradiata. Judging from the way the species varies in the Old World it ~~and~~ should probably include ^{var.} S. munilis also.

Achillea (Pternica) sibirica, Ledeb.
Cat. Dorp. 1811, & Fl. Ross. l.c.; Trautv. & Meyer,
Fl. Ochot. l.c. sub Pternica. Pternica
Mongolica, Fisch. in St. Prodr. b, p. 22. A.
mulliflora, Hook. Fl. Bor. Russ. p. 318; Torr.
& Gray, Fl. 2, p. 408. Danish Gulf,
Ochotsk Sea; in valleys.

This is certainly the same as the Arctic American plant, A. richardsonis A.
Pternica. It is probably A. serrata of
Ketz (Pternica serrata, DC.), as Ledebour

prospect.

Leucanthemum integrifolium, Sc.
 Prod. 6, p. 45. & 7, p. 296; Ledeb. Fl. Ross. 2,
 p. 540. Cleropanthemum integrifolium,
Richard, in Frankl. Journ.; Nord. Akad.
Act. 1, p. 319, t. 109. Arakantchetchene
Island.

Leucanthemum arcticum, Sc.
 Fruct. & Fl. Tigray Altai. p. 82. L. Grmelinei,
 l.c.; arcticum of L. Grmelinei,
 Ledeb. l.c. Arakantchetchene Blaud.
Yamisk Gulf, ^{and Oval Bay, Kamtschatka,} on the shore
 The specimens, especially those
 from the gulf, manifestly unite
 Ledebur's L. Grmelinei with L. arcticum

Leucanthemum Sibiricum. Sc.
 l.c.; Ledeb. l.c.; Kuprecht, Fl. Samoj.
 Sisural. p. 42. Ayan, Okhotsk
Sea. Rays bright purple.

Even this may pass through L. Grmelinei
 into L. arcticum. But the leaves are
 thin, ~~and~~ bright green, and more divided.

Tanacetum vulgare, Linn.; var.
boreale, Trautv. & Meyer, Fl. Ochot. p.
 54. ~~T.~~ T. boreale, Fisch. in Sc. Prod.
 b. p. 128; Ledeb. Fl. Ross. l.c. Wet
 table-land, Coal Bay, on the West
 coast of Kamtschatka.

Tanacetum Pallasiianum, Trautv.
 & Meyer, Fl. Ochot. p. 55. Artemisia
Pallasiiana, Fisch. in Sc. l.c. p. 116.
 Ryan Bay; on bluffs near the sea.

The specimens accord well with
 Trautveller and Meyer's description, and
 were gathered in the same region. The
 flowers are yellow and altogether those
 of Tanacetum.

Artemisia borealis, Pall., Fl. 3. p. 73;
 t. 42. f. 1; Bess. in Novik. & Sc.; Ledeb. Fl.
 Ross. 2. p. 564; Trautv. & Meyer. Fl. Ochot.
 p. 53. Petropavlovski, Kamtschatka;
 and Arakantschene Island.

In various forms, all rather large
 and well developed. One of them, from
 Tschelchala, 1175^m is remarkably robust, and
 forms a compound panicle, a foot high. The heads consequently
 rather smaller, the involucral scales granish.

It accords very well with Bessie's var. *Mertensii*. At the same time it is undistinguishable from his *A. concreta*, & at least ^{as to} the American plant, which is only a northern state of *A. Canadensis* of Michaux.

Artemisia Norvegica, Fries, Novit.
ed. 1. (1817), p. 56, & ed. 2, p. 265, & Summ. Veg.
Scand. p. 185; Reichenb. 2e. Brit. t. 89.

Nar. *arctica*, A. *arctica*, Less. in
Linnæa, b. p. 213; Dc. Prod. b. p. 119; Hook. &
Am. Bot. Brach. p. 125; Ledeb. l. c. A. *Cham-*
**isssiana*, Besser, in Hook. l. c. Janisch Gulf,*
Ochotsk, in valleys near the sa. Kra-
Kantchechare Island, on hills, and a
large form on grassy flats near the t-
hose.

Some of the forms, although larger than the Norwegian plant, confirm Hooker's suspicion, and lead us to refer *A. arctica* to *Norvegica* without hesitation. The base or tube, but not the apex, of the corollas is beset with very long villous hairs.

Artemisia vulgaris, Linn., var.
Filesii, Ledeb. Fl. Ross. 2. p. 586. A.
Filesii, Ledeb. in Mem. Acad. Petersb.;
 Dc. l.c.; Torr. & Gray, l.c.; Trautv. & Meyer,
 l.c. Coal Bay, West coast of Kamts-
 chatka ('flowers yellow'). Petropavlovski,
 Arakanutchene Island.

Artemisia glomerata, Ledeb. in
 Mem. Acad. Petersb. & Fl. Ross. l.c.; excl.
 sp. Horst. & Arn. Hs. Stony hillsides,
 Arakanutchene Island.

Silky-canescens with a fine appre-
 sed pubescence. Corolla ^{"yellow"} appearingly hairy
 on the outside of the lobes.

Artemisia Senjavinensis, Besser,
 Suppl. p. 64; & Dc. Prodr. 6. p. 116; Ledeb.
 l.c. *A. Semiarvensis*, Besser. Bot. p. 55.
A. glomerata, Horst. & Arn. Bot. Bruch. p.
 423, non Ledeb. *A. androsacea*, Seemann,
 Bot. Herald. p. t. . .

With the last; abundant on stony
 hills.

Dr. Seemann has confirmed the
 doubt expressed in the Flora of North America,

by showing that, as was suspected, the specimens from Kotchries' found referred to *A. glomerata* by Hooker and Arnott, do not belong to that species. He has described and admirably figured the plant, under the ~~the~~ characteristic name of *A. androsacea*. We cannot doubt, however, that it was already published, under the name of *A. Senjavinensis*. The numerous and very fine specimens before us were gathered at a station ~~geo~~ about half way between the two at ~~from~~ which *A. Senjavinensis* has been collected. The cotyledons, yellow when fresh, are glabrous, but dotted with ^{scattered} resinous glands; the leaves in the smaller specimens very few entire to three-cleft; in the larger ones those of the tufts are deeply 3-5-cleft, and very densely and strongly silky-villous.

Antennaria alpina, N. Br.; Torr.,
Gray, Fl. 2. p. 430 (ed. var. B.); Ledeb.
Fl. Ross. 2. p. 611. Arakanitetchene
Island.

and) Some specimens are monosporophalous,
 but the set scales of the involucel (in

female plants) are all slenderly acuminate, lived, and scarious. They clearly belong to *A. monosiphala*, DC. Other specimens, otherwise the same have two, three, and four heads.
~~The~~ The plant from Labrador which Dr. Sturz has communicated under the name of *A. monosiphala*, has the inner involucral scales obtuse and whitish; and it must be a variety of *A. Bartramica*.

Ligularia Sibirica, Cass.; DC., Prod., b. p. 315; Ledeb. Fl. Ross. 2. p. 620; Trautv. & Meyer. Fl. Octot. p. 56. Nyan Bay, Ochotsk Sea.

Gacalia hastata, Linn.; DC. l. c.; Ledeb. l. c.; Trautv. & Meyer. l. c. Nyan Bay; with the preceding.

Gacalia auriculata, DC. l. c.; Ledeb. l. c.; Trautv. & Meyer. l. c. Tuklis-topp Harbor, Shantar Island, Ochotsk Sea, on shaded hillsides.

Slender forms with a simple raceme,

and 4-5-flowered heads; and shorter plants with crowded, thyrsoid-paniculate, 7-8-flowered heads. "Flowers white".

Arnica alpina, Lest ad.; Less. in Linnaea, b. p. 235; Ledeb. Fl. Ross. l. c. A. angustifolia, Nahl. Arakantchetchne Island.

Senecio frigidus, Less. in Linnaea, b. p. 239; DC. Prod. b. p. 347; Stark. Fl. Bon-
au. t. p. 334, t. 112; Torr. & Gray. Fl. 2. p. 445; Ledeb. Fl. Ross. 2. p. 632; Trautv. Fl. Tung. p. 37. Cineraria frigida, Richards. App. Frankl. Jour. p. 20; Stark. & Arn. Bot. Bleich. p. 126. Hill sides, Arakantchetchne Island. (Holia integrerrima, obovata vel spatulata pubes floccosa ~~to~~ lanata.)

Var. dentatus: ~~glabro~~ foliis glabris vel ~~se~~ glabrat. oblongo- vel linearis lan-
cedatis plenisque acutis, caulinis pre-
sertim argute dentatis, involucro lana-
densa intricata (brunnea) vestito. — Ara-
kantchetchne Island.

The first form is the same as Chamisso's plant from the island of St. Lawrence, and also like Hooker's figure, ~~only~~
 but only half as large in all its parts. The variety, which grows in similar situations is often as large as the figure cited (except as to the heads); but the leaves are mostly bare from an early period, and are ~~remarkably~~ nearly all toothed, the caudine ones pretty strongly so, and acute or tapering from a broader partly-clasping base. The involucle is densely woolly with ~~the~~ purplish brown jointed hairs, as is well described by Lessing and by Ledebour. In the other form ~~they~~ ^{there} are much fewer and shorter, inconspicuous, and under a lens glandular. The pappus in both varies ~~from~~ in length, but generally it scarcely exceeds the slender tube of the disk-corolla. It is so closely and strongly denticulate and roughish that the species (along with *S. Pseudo-Aurica*) would probably be ~~better~~ ^{as well} placed in the genus *Astronium*. Like the latter genus, moreover, the rays of the larger heads are frequently furnished with sterile stamens. This

Species is said to extend into Altai and Dahuria, and Turezanius, in his Flora Baicalensi-Dahurica, refers to it De Candolle's *Senecio Turezanius*, the character of which pretty well accords. But our Altai specimen under the name of *S. pigidius* from Bunge, which is probably the "Planta Altaica densius floccosa cornuta", has not only a different kind of wool, but a ~~fines and softer~~ ^{it can hardly belong to *S. pigidius*,} pubescence of much finer and softer bristles, only obscurely and ^{smoothly} denticulate, and pithy as long as the disk-corolla. Variable as that present species is in ~~many~~^{some} respects.

Senecio resedae folius. Linn. in Linnaea,
b. p. 243; Hook. l.c. t. 117; Ledeb. l.c. Hill-
sides. Brakantchev Island.

A great variety of forms as to size and foliage; but all have moncephalous scapes.

Senecio Hookeri. Torr. & Gray. Pl. 2. p.
438? Coal Bay. West coast of Kamtschat-
ka, on table lands.

Senecio octoglossus, Sch. Prod. b. p. 354; Var. Turczaninovii, Fisch. & Lall., Trautv. & Meyer, Fl. Ocht. p. 57. S. Fuchsii var. Turczaninovii, Sch. l. c. p. 353. Ryan Gray, Ochotsk; in ravines.

Senecio Pseudo-Arnica, Less. in Linnaea, b. p. 240; Stock. Fl. Bor.-Am. i. p. 334, t. 113; Torn. Gray, l. c.; Ledeb. l. c. p. 643; Trautv. & Meyer, l. c. Arakamutchetchene Island; on sand beaches near the sea.

(Fleshy) Stems from 2 to 8 inches high, naked below, sending down long and coarse fibrous roots from the lower end. Leafy above, mostly monolepistalous; the lowest leaves obvate-spatulate and entire. Achenia 4 lines long, very smooth, somewhat angled, but only obscurely if at all sulcate.

Gaussiera subsinuata, Ledeb. Sc. Pl. t. b2. & Fl. Ross. 2. p. 662; Trautv. & Meyer, l. c. p. 57. Coal Bay, West coast of Kamtchatka; in ravines and shaded places. (Tamsk Gulf; on hill sides.

Stems a foot and a half high,

Lower leaves broader, and the stem shorter and more leafy than in Ledebour's figure. It would appear to pass into the next; but the receptacle is naked.

Saussurea Tilesii, Ledeb. l. c.

t. 60. Serratula Tilesii, Ledeb. in
Mem. Acad. Petersb. 5, p. 562. Coal
Bay, West coast of Kamtschakai, in
ravines and shaded places.

A tall and thin-leaved state of
the species, with the leaves green on
both sides and nearly glabrous. Stem
a foot and a half high, much exceeding
the radical leaves. Receptacle chaffy
with filiform paleæ.

Saussurea angustifolia, S. ;
Ledeb. l. c. Arakantchchene Island.

Ledebour doubtless admits too
many species. This is his and he ban-
dles S. angustifolia, although the lower
leaves are sometimes oblong and obscurely
denticulate; but it corresponds with
narrow-leaved specimens of S. alpina
var. rectangulifolia of Hooker, and it appears

to pass into *S. alpina*.

Glecorzona radiata, Fischer; Ledeb.
Fl. Alt. 4, p. 160, & Fl. Ross. 2, p. 783; Trautv.
& Meyer, Fl. Ochot. p. 58. Valleys and
hillsides, Fabius Bay and Ryan Bay,
Ochotsk Sea.

Hieracium umbellatum, Linn.;
Ob. Prod. 7, p. 224; Ledeb. Fl. Ross. 2, p. 855;
Trautv. & Meyer, l. c. Shaded hillsides,
Ryan Bay.

Mulgedium Sibiricum, Less.
Syn. p. 142; Ob. l. c.; Ledeb. l. c.; Trautv.
& Meyer, l. c. Kamtsk Gulf and Ola
Bay, Ochotsk Sea.

Taraxacum dens-leonis, Desf., Fl.
Alt. 2, p. 228; Ob. Prod. 7, p. 145; Torr. & Gray,
Fl. 2, p. 494. *T. officinale*, Vill.; Ledeb.
l. c. p. 812. Arakanschetschne Island, on
hillsides.

Taraxacum ceratophorum, Ob.
l. c.; Torr. & Gray, Fl. 2, p. 494; Ledeb. Fl.

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(*Sentodae curvophorum*, Ledeb. Fl. Alt. & Zec. Pl.)
Ross. L. p. 813.^{1st. 3rd.} Arak and Chetene
Island; on flats.

Campanulaceæ.

Campanula cybansis, Rudolphi, Tafelv.

& Mayer, H. Cehor, p. 60 in Nodder, Silv.; Chamisso & Schlecht. in Linnæa, 6, p. 41. Wahlenbergia hornemanniana, H. Prod. 7, p. 425; Kudub. H. Ross. 2, p. 871. Fabius Bay, J. Small

var. dentata: major; foliis admodum compactis latoviribus et brevioribus, grosse et acutè dentatis, lanceolatis oblongis vel inferioribus obovato-oblongis; corolla caerulea.

In many respects our plant accords with the description given by Chamisso & Schlechtendal. The root is rather thick, and sends up from the crown several stems about nine inches high, at the same time that it throws off stoloniferous branches furnished with stems at their extremities. The leaves are mostly narrow lanceolate, rather crowded than scattered, furnished on each side above the middle with from two to four more or less salient acute teeth, the lower and the upper smaller than the intermediate ones and none much exceeding an inch in length. The filaments are not perceptibly broader at the base than at the apex & the style is smooth.

Campanula uniflora, Linn.; Le Det. H. Ross. 2, p. 890. Nakantetchéche Island,

Ericaceae.

Vaccinium præstans (Lamk., in Linn. Trans. 10, p. 264, t. 9): pyramidalum; caule a basi repente gracili assurgente in formē bracteato ~~api~~ superne 3-5 foliato; foliis late ob-ovatis ovatis in petiolū subito contractis reticulato-venosis argute mucronatis serrulatis ciliatis subtus ad venas pubescentibus pro planta magnis (se qui-biplicaribus) deciduis; racemo ^{bran} 3-5-floro; bracteis lanceolatis & cariosis deciduis; calyxis limbo 5-lobo, lobis ovatis ciliatis; corolla cylindraceo-campanulata; filamentis pilosis; antheris inclusis, loculis breviter tubulosis, arista dorsali obsolete; bæcca ampla 5-loculari. — Western Kamtschatka, on hillsides near the sea, probably at Coal Bay, gathered in the latter part of July, by J. Small.

The scanty specimens of this very rare plant are mostly in fruit, like that of Pallas's herbarium figured by

Lambert; but the remains of a flower or two serve for completing the character. It is a true Vaccinium, of the section Euvaccinium, except that the filaments are hairy and the dorsal awns are reduced to short processes. The corolla is reddish. Ovary and young fruit 5-angled: no vestiges of intermediate partitions. The ascending stems rise only 2 or 3 inches above the surface of the ground: they rise from an creeping, probably subterranean base, ~~at the~~ as in Gaultheria procumbens. The species it most resembles is V. cespitosum, Michx.; but it is much larger in its leaves,

(72)

~~Dwarfed.~~

Vaccinium Vitis-idaea, Linn.; Wedd. Fl.

Fl. Ross. 2, p. 901; Fl. Prod. 7, p. 568; Hook. & Arn. Bot.
Beechey, p. 116, 127; Griseb. & Meyen, Fl. Cebot. p. 61
in N. Boddam. Siberia; Rupr. Fl. Samoy. Cesural.
No. 188. Yamal Gulf, J. Small. Arakamschetchen
Island.

Vaccinium uliginosum, Linn. Wedd.

Fl. Ross. 2, p. 904; Fl. Prod. 7, p. 574; Hook. &
Arn. Bot. Beechey, p. 116, 127; Griseb. & Meyen, l. c.;
Rupr. l. c. Yamal Gulf, J. Small. Arakamschetchen
Island.

Aestrostaphylos alpina, Spreng.; Fl. Prod.

7, p. 584; Wedd. Fl. Ross. 2, p. 908; Griseb. & Meyen,
Fl. Cebot. l. c.; Rupr. l. c. Arbutus alpina, Hook. &
Arn. Bot. Beechey, p. 127. Coal Bay, J. Small.
Arakamschetchen Island

Cassiope tetragona, Don; Fl. Prod. 7, p.

611; Wedd. Fl. Ross. 2, p. 912. Andromeda tetragona,
Hook. & Arn. l. c. Arakamschetchen Island.

Cassiope mertensiana, Don; Fl. Prod. l. c.; Griseb.

& Meyen, Fl. Cebot. p. 63 in Nodden. Siberia. Fabius Island
J. Small

Phyllodoce sagifolia, Salisb.; Lideb. Fl.
Ross. 2, p. 916; Fl. Prod. 7, p. 713.
Arakamschetschen Island.

Douglasia procumbens, Desv.; Fl. Prod.
7, p. 714; Lideb. Fl. Ross. 2, p. 918; Traub & Meyer,
Fl. Cehov. l. e. Azalea procumbens, Hook. & Arn.
Bot. Beechey, p. 127. Arakamschetschen Island.

Rhododendron Lapponicum, Nahleb. j. Fl.
Prod. 7, p. 723; Lideb. Fl. Ross. 2, p. 920.
Arakamschetschen Island.

Rhododendron Kamtschatcianum, Pall.;
Fl. Prod. 7, p. 726; Lideb. Fl. Ross. 2, p. 922; Hook.
& Arn. Bot. Beechey, p. 116; Hook. Fl. Bore. Am. 2,
p. 43. Coal Bay, J. Small. Petropavlovski.
Arakamschetschen Island.

Sedum palustre, Linn.; Lideb. Fl.
Ross. 2, p. 923; Hook. & Arn. Bot. Beechey, p. 127
Traub. & Meyer, Fl. Cehov. p. 64 in Nordens. Sib.
Rupr. Fl. Samga, Cisural. No. 191. Arakamschetschen
Island.

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Pyrola rotundifolia, Linn.; Gidde. ^{Fl.} Ross. 2, p. 928; Ab. Prod. 7, p. 772; Hook. & Arn. Bot. Beechey, p. 127; Trautv. & Meyer, l. c.; Rupr. l. c.; Hook. Fl. Bor.-Am. 2, p. 46 Cratkanuschez Schum Island, var. panita Hook. l. c.; Far. bracteata, J. Small, (creality not recorded.)

Pyrola secunda, Linn.; Gidde ^{Fl.} Ross. 2, p. 930; Ab. Prod. 7, p. 774; Trautv. & Meyer, Fl. Schot. l. c.; Hook. Fl. Bor.-Am. 2, p. 46. Ayan, J. Small.

Moneses uniflora, Gray; Trautv. ~~Moneses~~
grandiflora, Salisb.; Gidde. ^{Fl.} Ross. 2, p. 931; Trautv.
& Meyer. l. c. Pyrola uniflora, Hook. Fl. Bor.-Am. 2,
p. 46; Ab. Prod. 7, p. 775; Ayan, J. Small

Stem with one or two bracts or even erectolate.

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Primulaceae

Primula rivularis, Pall.; Ledeb. Fl. Ross.

3, p. 10; Fl. Prodr. 8, p. 39; Hook. & Arn. Bot. Beechey, p. 129. Damp hillsides Arakamchetchen Island

var. humula; Ledeb. l.c. The specimens vary from little more than one to six or even eight inches in height; the base of the leaves and upper part of the scape and pedicels are more or less fornicate, and the segments of the calyx on the inner side are markedly so.

Primula borealis, Duby in Fl. Prodr. 8, p. 43; Ledeb. Fl. Ross. 3, p. 15. P. mistassinica, Cham. & Schlecht. in Linnaea, p. 213; Hook. & Arn. Bot. Beechey, p. 129. Arakamchetchen Island.

Primula cuneifolia, Ledeb.; Duby in Fl. Prodr. 8, p. 39; P. saxifragifolia, Fl. Prodr. 8, p. 39; Hook. & Arn. Bot. Beechey, p. 128. Coal Bay and Falmus Bay, J. Small.

Androsace arctica, Cham. & Schlecht. in Linnaea 1, p. 220; Fl. Prodr. 8, p. 48; Ledeb. Fl. Ross. 3, p. 16. On pebbly flats, Arakamchetchen Island.

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Androsace Chamagniesii, Koch; D. Prodr.
8, p. 51; Lidib. Hl. Ross. 3, p. 18; Hook. & Arn. Bot.
Beeckey, p. 129. Arakanschetschen Island.

Androsace septentrionalis, Linn.; Lidib.
Hl. Ross., l.c.; D. Prodr. 8, p. 52; Hook. & Arn. Bot.
Beeckey, p. 129; Rupr. Hl. Tenuif. Circinal. No. 202.
Hillsides, Petropavlovski. Pebbly beaches near the
sea Arakanschetschen Island.

Dodecatheon pigidium, Cham. & Schlecht., in
Dunnae, pp. 222; Lidib. Hl. Ross. 3, p. 22; Hook.
Beeckey, p. 129; D. Prodr. 8, p. 56. Damp hillsides,
Arakanschetschen Island. Part of the specimen collected
by Mr. Briggs.

The comparative length of the leaves
& petiole seems to form a better specific ~~distinction~~
character than any derived from the tube of stamen.
In our plants, the oval leaves are narrowed more
or less abruptly into a margined petiole longer
than the lamina, while those of D. Meadia are mostly
longer and narrower and on much shorter petioles.

Friesalii European, Linn.; D. Prodr. 8, p.
59; Lidib. Hl. Ross. 3, p. 23; Grauer & Meyer, Hl. Chit.
p. 67 in Middlew. Sibir.; Hook. & Arn. Bot. Beeckey, p.
116. Petropavlovski.

The leaves are very manifestly ^{the point} renkulated towards

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Gentianaceæ.

Gentiana austiculata, Pall.; Ledeb. Fl. Ross.
3, p. 55; Griseb. in Dc. Prod. 9, p. 77; Trautv. & Beyer,
p. 67 in Norden. Sibir. In ravines near villages,
Ola Bay and on flats near the sea, Taourinsk Gulf
Ola Bay, J. Small.

Gentiana tenella, Rottb.; Ledeb. Fl. Ross.
3, p. 56; Griseb. in Dc. Prod. 9, p. 98; Rupr. Fl. Samoyd.
Cisural. No. 209. G. glaciata, Cham. & Schlecht. in
Sindia, 1, p. 182; Hook. & Arn. Bot. Beechey, p. 127.
Flowers purple. Dry hillsides, Arakamtschetchen
Island.

Gentiana propinqua, Richards; Dc. Prod.
9, p. 100; Ledeb. Fl. Ross. 3, p. 57; Hook. Fl. Bor.-Am.
2, p. 62, t. 150. G. Kurikiana, Hook. & Arn. Bot. Beechey
p. 127. Flowers purple. Stony flats near the sea and
on damp hillsides, Arakamtschetchen Island.

Gentiana barbata, Wöl.; Ledeb. Fl. Ross.
3, p. 59; Trautv. & Beyer, Fl. Oehot. p. 67 in Norden.
Sibir. G. detonsa var. barbata, Griseb. in Dc. Prod.
9, p. 101. Flowers blue. Taourinsk Gulf, Ola Bay and
Ayan, J. Small

Gentiana prostrata, Hanke; Ledb. Fl.
Ross. 3, p. 62; Grisib. in D. Prodr. 9, p. 106; Cham.
 and Schlecht. in Linnæa, 1, p. 183. Flowers purple.
 Sandy hillocks near the sea & on damp hillsides
 Arakantschene Island.

Gentiana pigidia, Hanke; D. Prodr.
9, p. 114; Cham. & Schlecht. in Linnæa, 1, p. 173.
 Flowers light greenish yellow with dark bluish-
 purple lines and specks on the outer folds of the
 corolla. In valleys, Arakantschene Island.

Gentiana glauca, Pall.; D. Prodr. 9,
 p. 111; Ledb. Fl. Ross. 3, p. 66; Horkel's Bot.
Beechey, p. 127; Seem. Bot. Herat, p. 36; Cham.
 & Schlecht. in Linnæa, 1, p. 175. Dry hillsides,
 Arakantschene Island; also on Spurnaughie
 Islet.

Pleurogyne Carninthica, Grisib.; D. Prodr.
9, p. 122; Ledb. Fl. Ross. 3, p. 71. Flowers ^{bluish}
~~in swamps.~~ yellow. Ayan, ~~on hillsides.~~ J. Small.

Halenia Sibirica Borkhaus; D. Prodr.
9, p. 128; Ledb. Fl. Ross. 3, p. 74. Flowers greenish
 yellow. Ayan, ~~on hillsides.~~ J. Small

(79)

Swertia obtusa, Ledeb. Fl. Ross. P, p. 75;

S. perennis, Frankl. & Meyer, Tel. Schot. p. 68 in

Waddenz. Sibiri; Dc. Prodri. 9, p. 132. S. perennis,
var. alternifolia, Cham. & Schlecht. in Linnaea,
1, p. 189. ~~Ht. Blue.~~ Flowers blue. Ceyan, in ravines

J. Small

Polemoniaceae

Polemonium caeruleum, Linn.; G. L.

Prod. 9, p. 317; L'vob. Fl. Ross. 3, p. 83; Grunw.
v. Muyr. Fl. Cehst. p. 69 in Middew. Sibir; Hook.
v. Arn. Bot. Beechey, p. 127; Scam. Bot. Herald,
p. 37. Fl. blu or bluish-purple. Ryan, J. Small
Arakamcheshene Island, Oval Bay, Kamtschatka,
and

Polemonium pulchellum, Bronge; L'vob.

Fl. Ross. 3, p. 84; Fl. Prod. 9, p. 317; Rupr. Fl. Janap.
Cisural. v. 207. P. humile, Grunw. Fl. Taimyr,
p. 34 in Middew. Sibir; Hook. v. Arn. Bot. Beechey
p. 116. On sandbeaches, Petropavlovski.

Dipsenia Lupponica, Linn.; L'vob.

Fl. Ross. 3, p. 85; Grunw. & Muyr. Fl. Cehst.
p. 69 in Middew. Sibir; Scam. Bot. Herald, p. 37;
Flowers light yellow-singed with red, Arakamcheshene
Island. Oval Bay on open stony lands, flowers
purple, J. Small

Boraginaceae.

Mertensia maritima, G. Don; Dc. Prod.
10, p. 88; Lidb. Fl. Ross. 3, p. 132; Fraud & Meyer
Fl. Cehot. p. 69 in Nordens. Silv.; Seem. Bot. Herbd.
p. 37. Lithospermum maritimum, Bot. Beechey, p. 116,
128. On sandbeaches, Arukanschchene Island, Mr. Boggs
Petropavlovski, on sandbeaches. Flowers blue.

Mertensia denticulata, G. Don; Lidb. Fl.
Ross. 3, p. 133; Dc. Prod. 10, p. 90. Lithospermum
denticulatum, Hook & Arn. Bot. Beechey, p. 116, 128.
Mertensia pilosa, Seem. Bot. Herbd. p. 37. Flowers pur-
ple. Ayan, in vallis. J. Small.

Our plants accord very well with the descriptions and with specimens in Herb. Gray, also with the figure in Lidbeck's Icones except that it represents a less leafy form.

Myosotis sylvatica, Hoffm.; Dc. Prod. 10, p.
107; Lidb. Fl. Ross. 3, p. 145; Seem. Bot. Herbd. p.
37; M. alpestris, Hook. & Arn. Bot. Beechey, p. 128.
 Flowers blue. Ayan, in vallis; also Yumuk Gulf.^{J. Small}

The plants from the above localities, at first sight, appear sufficiently unlike to belong to distinct species. Those from the latter place are rigidly erect, from twelve to eighteen inches high, scarcely branched, with two or three rather close-flowered racemes, and

with even-^{or} -ap pressed, lanceolate, acute, villose-hispid leaves. The other form, of the same height, has a feeble ascending habit, fewer & broader simply hispid, spreading leaves, with longer & slenderer racemes.

Oenothera aristivides, Gilph. Sc. Prodr. 10,
p. 125; Tenth. Fil. Ross. 3, p. 149; Seem. Bot. Herat, p.
37, t. 8. Myosotis aristivides, Cham, in Sonnena, 4, p. 443;
Arakamchchene Island, on flats near the sea & on
hillsides, a part of the specimen collected by Mr. Bogg.

Serpulaceae

Puronia serpyllifolia, Linn. Berth. in Dc.
Prod. 10, p. 482; Ledeb. Fl. Ross., 3, p. 248.
Petropavlovsk.

Castilleja pallida, Kornth.; Dc. Prod. 10,
p. 531; Seem. Bot. Herbd., p. 37; Rupr. Fl. Samoyd.
Cisural. No. 213; Hook. & Arn. Bot. Beechey, p. 128
Flats near the sea, Arakanshchene Island.

Bartsia alpina, Linn.; Dc. Prod. 10, p.
544; Rupr. l.c.; Ledeb. Fl. Ross. l.c. Flower,
purple. Ayan, in waste grounds. J. Small.

Pedicularis verticillata, Linn.; Dc.
Prod. 10, p. 563; Ledeb. Fl. Ross., 3, p. 270; Rupr.
l.c.; Seem. l.c. Flower, purple. Ayan, J. Small
In several flowers examined the filaments
were beardless.

Pedicularis resupinata, Linn. Wallp.
Rep. 3, p. 418; Grutov. & Beyer. Fl. Cehot. p. 72 in
Nedden. Sibiri; Ledeb. Fl. Ross., 3, p. 281. Flower,
pink. Ayan, in valleys, J. Small

Pedicularis euphrasioides, Steph.; Dc.

Prodre. 10, p. 567; Lerch. Hl. Russ. 3, p. 284; Nalp.
Rifs. 3, p. 421; Flora of Norway. Hl. Cebot., p. 72 in
Nordensk. Arb. Bot. Kral., p. 38.
Silvery flowers, yellow, on open table-
lands, Coal Bay, Gabius Bay, ² small
island.

Peduncularis sudetica, M'Clos.; Lindb. 310

Poss., 3, p. 286; Griseb. Fl. Fannin. p. 32 in
Sordens. Siber.; Seem. Bot. Herbar., p. 38; G. P. Dr.
10, p. 368; Coal Bay, I. Svalb. Damp hillsides, Crakansechekem Island,
Mr. Bogg. Upper lip of corolla dark red, lower pink; throat specked
Pedicularis lanata, Willd. Lindl. M. Korn.,
3, p. 299; Hook. & Arn. Bot. Bactey, p. 128. Stony
hills, Crakansechekem Island.

Pedicularis versicolor, Wahlenb.; Gidb.

H. Ross. 3, p. 300; Trenton. Fil. Garnier, p. 33 in
Nordens. Silv.; Seem. Bot. Kereul, p. 38; Benth.
Benth. in De. Prod. n. 10, p. 578. Coal Bay, J. Small
Gump Sill, Arakamtschuk Island.

The flowers have the galea marked with red
lines; the tube & lower lip are yellow & the anthers
green.

Pedicularis caputata, Adams; Lidib. Fil. Ros., 3,
p. 301; Fl. Prod. 10, p. 581; Seem. L. C.; Griseb. l.c. Flowers
yellow tinged at the tip with pink. Amakomachchene Island,

(85)

Grobanchaceæ.

Boschniakia glabra, C. A. Meyer; Dc.

Prodr. II, p. 89; Ledeb. Fl. Ross. 3, p. 323. Grobanche
rossica, Cham. & Schlecht. in Zurnea, 3, p. 132. G.
glabra, Hook. Fl. Borz. Am. 2, p. 91, t. 167.
Mountains in shady places, Halim Bay,
L. Small.

(86)

Selaginaceae.

Gymnandva Stelleri, Ohm. & Schlecht.
in Linnaea, 2, p. 563; Ledeb. Fl. Ross., 3, p. 332;
ib. Prodri. 12, p. 25; Semen Bot. Herat, p. 38; Grauto.
Fl. Kamtsch. p. 32 in Niedend. Sibir. Fl. bluish-
purple. Anakarschitsche Island.

(87)

Plumbaginee.

Starice Ameria, Linn.; var. arctica,
Ledeb. Fl. Ross. 3, p. 457; Hook. & Arn. Bot. Beechey,
p. 129. Ameria arctica, Seem. Bot. Heute, p. 39;
Trans. Il. Tamyr. p. 330 in Abidens. Libiv.; Rupr.
Fl. Samoyd. Cisural. No. 231. A. Cateau. Boissier
in Dr. Prod. 12, p. 681. Arakumtchekhem Islm.

(90)

Polygonaceæ.

Rheum Rhaeonticum, Linn., Gedeb. H. C. Ross
3, p. 446; Meissn. in Abh. Prodr. 14, p. 33. Ayan,
on hillsides & in vallies. J. Small

Cyathula veniformis, Hook.; Wedd. Fl. Ross., 3, p. 198; Traub. Fl. Fairway, p. 28 in Weddew. Sibir.; Seem. Bot. Berat., p. 39; Hook. & Arn. Bot. Buccher., p. 129; Weissner in Fl. Prod. 14, p. 37. Arakamtschetchen Island.

Rumex acetosella, Traub. in Fl. Fairway, p. 29; Wedd. Fl. Ross., 3, p. 506. Damp hillsides, Arakamtschetchen Island.

Rumex acetosa, Linn.; Wedd. Fl. Ross., 3, p. 510; Seem. C. e.; Hook. & Arn. C. e.; Traub. & Meyer, Fl. Cebot., p. 74 in Weddew. Sibir.; Weissner in Fl. Prod. 14, p. 64. J. Small. Locality not given.

Rumex acetosella, Linn.; Wedd. C. e.; Weissner in Fl. Prod. 14, p. 61; Rupr. Fl. Samojid. Goss. ural. No. 240; Traub. Fl. Bozau. p. 155 in Weddew. Sibir. Damp flats near the sea, Arakamtschetchen Island.

The specimens are from one to three inches high, with long linear not auriculate leaves, fasciculate at the base of the stem and more than half its height; at a base widely margined with reddish sheaths, which as well as those of the stem are conspicuously inflated.

Rumex graminifolius, Lamb.; Ledeb. Fl.
Ross. 3, p. 512; Meissner in Fl. Prod. 14, p. 64.
Plots, near the sea, Arakamchetchen Island.

Koenigia Islandica, Linn.; Ledeb. Fl.
Ross. 3, p. 534; Meissner in Fl. Prod. 14, p. 82.
Rupr. Fl. Samoja. Cisural. to 235. Hillsides, Arakam-
chetchen Island.

Polygonum Bistorta, Linn.; Ledeb. Fl.,
Ross. 3, p. 518; Seem. l.c.; Rupr. l.c. Trautv.
Fl. Iamyr. l.c.; Meissner in Fl. Prod. 14, p. 125.
Ligan on hillsides, J. Small. Arakamchetchen
Island, Hillsides. Flowers rose-color, anthers dark crimson

Polygonum viviparum, Linn.; Ledeb. Fl.
Ross. l.c.; Hooker Ann. Bot. Beechey, p. 116, 129; Seem.
l.c.; Trautv. Fl. Iamyr. l.c. Ligan, on hillsides
flowers white, J. Small. Arakamchetchen Island
Fl.

Polygonum polymorphum, Ledeb. Fl. Ross.
3, p. 524; Meissner in Fl. Prod. 14, p. 139; Trautv. &
Meyer Fl. Cehot. p. 22 in Meddins. Sibir. P. alpinum,
Hook. & Ann. Bot. Beechey, p. 129 ex Ledeb. Shantar
Island, in ravines. Flowers greenish yellow, J. Small.

Polygonum ³⁻petercarpum, n. sp.

Caule recto vel arrocenti simplici vel paucis ramoso, longitudinaliter striato glabro vel ad nodos deorsumque breviter retrorse pubescente; foliis (inferioribus ad ochream redactis) patens, linearilanceolatis acuminatis, basi angustatis breviter petiolatis, glabris vel ~~sub~~, subtus ad ^{ne rumpere} puberulis, margine ciliatis undulatisque inferioribus supra basin tertiam parte superioribus inae basi insertis; ochreis laxis revocostrati, rufis glabris vel basi pubescantibus; panicula angusta foliata; pedicellis bracteis latissimis & floribus pedicelli, exsertis florum equantibus supra medium articulatis; Sepalis ovalibus vel obovatis obtusi; Staminibus ovario dimidium equantibus; Achenio exerto calyce 3-4flo longiori obovato late triangulata stylis 3 curvatis coronata Stigmatibus capitatis; Semine ^{immature} valde stipitata, ~~ex~~ stipite apice sub contorta

Coal Bay, I. Smull. Arakamtschetschen Island.

The Specimens from two rather remote localities ~~are~~ are 8-15 inches high erect or slightly assurgent at the base; the short lower joints two or three times as long as the rather inflated leafless sheaths. Some of the specimens are clothed at & below the nodes with a more or less dense, short, retrorse pubescence, while the lower & upper parts are nearly or quite smooth. The joints, however, in which they seem most to differ from *P. polymorphum*

(92⁺⁺)

P. divaricatum, and other allied species, are in the conspicuously exserted & broadly winged achenium,
as well as in their rather strict nearly unbranched
habit.

(93)

Polygonum divaricatum, Linn.; Gord.

H. Ross, 3, p. 526; Meisner in Die Prodr 14, p. 140.

var. angustissimum, ^{1°} pilosum, Meisner, l. c.

Jamaic Gulf, near the sea. Flowers yellow. St. small

(94)

Empetrum nigrum,

Empetrum nigrum, Linn.; Gmel. II.
Ross., 3, p. 555; Traub. & Meyer, Pl. Bot., p.
76 in Middle Siber.; Sem. L.; Hork. &
Am. Bot. Buckley, p. 116, 129. Yamal Gulf,
I. Small. Arakamschikine Island.

(95)

Salicaceae.

Salix Caprea, Linn.; Host, Salix, p. 24, t. 66, 67; Ledeb. Fl. Ross. 3, p. 609; Grauh. & ~~Tolmey~~
Meyer, Fl. Cehut, p. 79 in Middendorf. Sibir., Rupr.,
Fl. Samoyd. Ussuri. No. 254. Petropavlovsk.
A large spreading bush about fifteen feet high.

Salix phyllicifolia, Linn.; Ledeb. Fl. Ross.,
3, p. 611; S. discolor, Host, Salix, p. 18, t. 60, 61;
Cham. & Schlecht in Linnaea, 6, p. 538 ex Ledeb.
Petropavlovski, on hillsides, a spreading bush
6-9 ft high.

Salix hastata, Linn.; Ledeb. Fl. Ross. 3,
p. 612; Grauh. Fl. Baganid. p. 153 in Middendorf.
Sibir.; Rupr. Fl. Samoyd. Ussuri. No. 259
J. Small, particular locality not recorded.

Salix shammizonia, Pall.; Ledeb. Fl. Ross.,
3, p. 612; Hook. & Arn. Bot. Beechey, p. 117, t. 26;
S. Fairymensis? Grauh. Fl. Fairym. p. 27 in Middendorf.
Sibir. On flats at the base of hills, branches prostrate.
Anakunshishene Island.

Without staminate flowers it may be impossible
to determine whether this plant & S. Fairymensis are

~~and the next week~~

~~the next~~

are the identical, but they agree in so many particulars as to leave but little doubt that they are the same.

Salix glauca, Linn.; Lindb. Fl. Ross. 3,
p. 618; Trautv. Fl. Taimyr. p. 268 Fl. Boyanid., p.
153 in Nodden. Sibir.; Rupr. Fl. Samojd. Cisural.
No 225. Orakanschekhem Island.

Salix arctica, Pall.; Lindb. Fl. Ross. l.c.
Seem. Bot. Herat., p. 40; Hook. & Arn. Bot. Beechey,
p. 129; Trautv. Fl. Boyanid., p. 154 & Fl. Taimyr,
p. 26, l.c.

Tar. leioarpa, Lindb. l.c. S. Richardson? Hook.
Fl. Bor.-Am. 2, p. 147, t 142. S. curvata? Turcz.;
Trautv. Fl. Chukot. l.c. Coal Bay on table-lands.
J. Small.

Salix Wwahlensi, Pursh; Lindb. Fl. Ross.
3, p. Seem. l.c.; Hook. Fl. Bor.-Am. 2, p. 152; Gray
Man. p. 418. S. ovalifolia, Trautv.; Lindb. Fl. Ross.
3, p. 620. Orakanschekhem Island on dry flat, near
the sea-side.

Salix reticulata, Linn.; Lindb. Fl. Ross. 3,
p. 623; Seem. l.c.; Hook. & Arn. Bot. Beechey, p. 180;
Rupr. Fl. Samojd. Cisural. l.c. Summit of hills,
in damp ground

(97)

Populus Wahl

Salix retusa, Tourn.; Lindb. Fl. Ross.,

3, p. 624; Seem. t. e.; Rupr. t. c.; Hook. & Arn.

t. e.; Host, *Salix*, p. 32, t. 103. *S. retusa*, var.
Mongolia, Braunm. Fl. Bogdand. p. 152 in Middle
Siberia. Among mosses on hillsides, Arakantsch
Tchern Island.

ritaria Linn? var. vibratula?

Salix potanini, Nahlenb.; Lindb. Fl. Ross.

3, p. 624; Seem. t. e.; Braunm. Fl. Fairngr. p. 25
in Middle Siberia; Rupr. t. c. Arakantsch-
Tchern Island

Our numerous specimens present a con-
siderable variety of forms. Those growing in
any sandy soil have the stems intricately branched,
with leaves varying from a little more than
a quarter of an inch to less than a line, & in shape
from elliptical to orbicular, while the aments are
only 3-4-flowered. Another form has ^{the} leaves oval,
or even lanceolate, nearly half an inch long, and
the aments little less than an inch. None of the
specimens have serrated leaves, and the young plants
are more or less pubescent with the leaves ciliate.

Populus suaveolens, Fisch. in Lindb. Fl. Ross.

3, p. 629; *P. balsamifera*, Hook. & Arn. Bot. Bazaar,

p. 117; Braunm. & Meyer, Fl. Cekot. p. 76 in Middle
Siberia; Petropavlovsk. A shade tree within
enclosures.

Betula.

Betula Eremoia, Cham. in Linnaeus,
6, p. 537, t. 6, f. 2. Ledeb. Fl. Ross. 3, p. 363; Traub.
v. Meyer, Fl. Ural. Cehot. p. 83 in Mordvin. Sibir. Ayan,
on hillsides. A tree 30 ft high. I. Small.

This species is readily distinguished by the
large tuft of densely woolly bud-scales at the
base of the fertile aments.

Betula fruticosa, Pall. Lich. C. e.;
Traub. & Meyer, t. c. Petropavlovski on hills
in dense thickets. A shrub 4-8 ft high.

In the form of the leaves, their pubescence
and color, as well as in the dentation, this
plant is strikingly like the preceding. They
are perhaps a little thinner in texture and
smaller, resinous-punctate beneath, truncate
or slightly cordate at base and on shorter
petioles; the latter and all the veins below and
above are clothed with a slightly tawny
villosity. The linear-lanceolate or subspatulate
light brown stipules are conspicuously ciliate
at the apex, and the spine, half the length of
the ament, ^{furnished} clothed with a few similar but
smaller bud-scales a little more than its own
length. The subligneous scales of the fertile ament

(99)

are ciliolate when young, but subglabrous at maturity, less deeply cleft, and the lobes are approximate; the lateral ones sub-recurved. The wing of the seed is scarcely half its width, the awl-like hardly reaching the base of the style.

Betula nana, Griseb. Fl. Ross.

3, p. 653; Seem. Bot. Herat., p. 41; Traub & Meyer, Fl. Ural. p. 85 in Monogr. Sib., Hook. & Arn. Bot. Beechey, p. 129; Rupr. Fl. Samoyd. Cisural. No. 246. Coal Bay, on table lands. J. Small Arakamtehkhene Island.

Alnus viridis, Stev.; Ledeb. Fl. Ross., 3,

Fl. Chm. in Tinnaa, 6, p. 538; Seem. l. c. A. Fritschas, Rupr. l. c.; Traub. Fl. Bogard., p. 182. Alnaster viridis, Ledeb. Fl. Ross., 3, p. 653; Traub. & Meyer, l. c. Ayar on hillsides, J. Small. Petropavlovski on hills — a spreading brush 40 ft. high.

(99)
Coniferæ

Pinus Ajanensis, Fisch. exs. sub *Picea* in *Grantov.*
Mayer Flora Cebot. p. 87. A large tree on moun-
tains in vallis at Ilkustoff harbor.

Pinus Sibirica, Ledeb. Fl. Alt. 4, p. 204, sub
Larix. *Larix Siberica*, Link in Linnaea 15, p. 535;
Grantov. Mayer in Flora Cebot. p. 88. *Pinus Tolbouini*,
Endl.; Ledeb. Fl. Ross. 3, p. 672; Lebres Ledebourii;
Ruprecht Fl. Samoyed. censuval. No. 269. ^YAcansk
Gulf. Ola Bay. A large tree on mountain sides

Pinus Berulka, Griseb. Sp. 1419; Ledeb. l.c.;
Grantov. Mayer, l.c.; Hook. & Arn. in Bot. Beechey,
p. 117. Coal Bay. A low bush inclining to spread
over the ground. Ayan, Petropavlovsk; a low
spreading bush 4-8 ft high.

~~196~~ (100)

Juncaginaceae.

Triglochin palustre, Linn. Sp. 482; Leib.
Fl. Ross. 4, p. 35; Kunth. Encycl. 3, p. 143; Hook. Fl.
Bor.-Am. 2, p. 161; Brullo & Meyer Fl. Octov. p. 90;
Ruprecht. Fl. Samoyd. cesural. No. 280; Ara-
kantschekheal Island.

A single specimen only, in fruit and
rather imperfect, was obtained.

(101)

Orchidaceae

Orechis aristata, Grisch.; Gray, Botany of Peru, Exptl., p. 320. Orechis laevifolia, Lindl., Fl. Ross., 4, p. 54. Hills, Petropanowski. Flowers purple

Peristylus viridis, Lindl.; Lindl., Fl. Ross., 4, p. 72. bæto glossum viride, Rupr., Fl. Samoy., Leizmäl., No. 274. Damp hillsides, Arukamtschekhem Island. Spiky flowers dull red.

~~198~~(102)

Iridaceæ

Iris setosa, Pall. in Mill. Herb. t. 993;
Lindl. Fl. Ross. 4, p. 88. I. Silinca, Hook. & Arn. Bot.
Buchey, p. 117. 130? Yamsk Gulf.

Iris Pseud-Acorus, Linn. sp. 56; Lindl. l.c.
Ayan. (in Bot. Journ.)

The specimens are imperfect, showing only
the top, & now more than a foot in length, of, it appears
by, a rather tall stout plant, but without any
radical or lower caudex leaves.

Smilacaceae

Trillium obovatum, Pursh, Fl. Am. sept.,
 1, p. 245; Keenth. Erym. 5; p. 124; Ledeb. Fl. Ross. 4,
 p. 121; Hook. & Arn. in Bot. Bucey, p. 117. Hillsides,
 Peterpaulovski. Flowers white.

Stephanotis rosea, Ker. Fl. Bon-Am. 2, p. 200;
 f. 18; Keenth. l. c.; Hook. Fl. Bon-Am. 2, p. 173; Ledeb.
 Ayan, on shady hillsides. J. Small
 The peduncle of the fruit is recurved, but
 exhibits no trace of the twist.

Smilacina bifolia Desf.; Lindl. l. c.; Hook. l. c.;
 Ruprecht. Fl. Samojid cisural. No. 277. Cornallaria
 bifolia, Linn. & Beck. Kajinthenum bifolium, G. &
 Auct. Ayan in shady valleys. Flowers white. Also
 Shantar Islands. ^{J. Small} Hillsides, Peterpaulovski.

(1041)
Silaceae.

Leloydin serotina, Salisb.; Kunth. Enam.
4, p. 244; Ledeb. Fl. Ross 4, p. 144; Fraun. Fl. p.
Taimyr, p. 24. Anthemone serotonum, Linn. & Herr.
seem. Bot. Her.
Arakantschetchen Island. Flowers whitish,
red-veined externally.

Allium splendens, Willd. herb No. 6477.c
Kunth Enam. 4, p. 420; Ledeb. l.c. Hillsides at
Petropavlovski. Flowers deep red or crimson.

Allium Schoenoprasum, Linn. Sp.
432; Lidderd. c.; Kunth, l.c. A. Sibiricum,
Fraun. & Meyer, Fl. Oehot. p. 93; Hook. & Arn. Bot.
Bucchey, p. 118, 130. Ryan on hillsides; flowers
purple.

Fritillaria Kamtschatcensis, Ker.
Brt. Nig. pl. 121b; Kunth, Enam. 4, p. 254;
Hook. Fl. Nov. Am. 2, p. 181, t. 193. Kamts
Gulf; Yan frit.

(105)

Melanthaceae.

Vergatum album, Linn. Sp. 1479. Ledeb.

H. Ross. 4, p. 208; Grunth. Enum. 4, p. 186. T. Lindl.
Braun & Meyer, Flora. Cebot. p. 95; Hook. Fl. Bor-
Am. 2, p. 178. Coal bay in ravines: flowers greenish-
yellow. Petropavlovsk on damp hillsides.

Iofieldia palustris, Huds. Fl. imp. p. 157.

Grunth. Enum. 4, p. 166; Ledeb. l. c.; Hook. l. c.;
Braun & Meyer, Flora. Cebot. p. 96. Hillsides
and the damp ~~soils~~ ground, Arakanischetchev
Island.

Iofieldia coccinea, Brown in Richards.

App. to Frankl. Journ. (ed. L. 2,) p. 11; Grunth. l. c.;
Ledeb. l. c.; Hook. l. c.; Hook. & Arn. Bot. Beechey
p. 130, t. 29. Arakanischetchev Island or
pebbly flats near the bay.

Iofieldia calyculata, Wahlenb. H. Gap.

p. 90; Grunth. l. c.; Ledeb. l. c.; Braun &
Meyer, l. c. Coal bay on table-lands.

Juncaceæ.

Luzula pilosa, Willd.; Lindb. Fl. Ross. 4, p. 214; Meyer in Linnaea, 22, p. 883; Hook. Fl. Brn.-Am 2, p. 188; Rupr. Fl. Samjw. Lissunal. No. 281. L. vernalis Kuntz, Enum. 3, p. 297. Juncus pilosus, Auct. Dry hills, Petropavlovski.

Our specimens have none of the coloration at the base of the leaves mentioned as one of the specific characters; and the carpels are broadly ovate and very decidedly longer than the basal, acute sepals.

Luzula spadicea, Dc.; Lindb. Fl. Ross. l.c.; Meyer, l.c.; Kuntz, l.c.; Traub & Meyer. Fl. Behring, p. 97 in Morden. Silv. Coal Bay on subblands J. Small.

(var. pumila; Arakanschukon Island)

The plants from Coal Bay have the panicle diffuse, the stem nearly half the length of the sepals, the filaments longer than the anthers and the seeds oblong. Those from Behring's Strait are smaller with the panicle of a few rather dense heads and the oval seeds are quite conspicuously mottled-punctate.

Luzula acuminata, Wahlenb. Meyer, l.c.; Seem. Bot. Herat, p. 42; Lindb. l.c.; Kuntz, l.c.; Traub & Meyer, l.c. Tabun Bay on mountain tops J. Small. Arakanschukon

ne Island.

Several forms are in the collection. That from Western Kamtschacka and some specimens from Behring's Straits accord pretty well with the description of *L. hyperborea*, Br. The sepals are longer than the capsules & twice the length of the stamens of which the filaments are longer than the anthers. Another form, *L. acuata*, var. a. Meyer l.c. has the bracts ^{lvs} so strikingly puberulent as to give the spikelets a grayish hue. The stamens are one third shorter than the sepals. Still another form has more diffuse panicles, the very acute sepals a little longer than the apiculate capsules, the stamens half the length of the sepals, and the oval anthers shorter than the filaments.

Luzula campestris, Dc. M. Frac. No. 1827.

Ledeb. l. c.; Bunth l. c.; Meyer l. c.; Traub. &
Meyr. l. c.; Hook. l. c.; Petro-pavlovskii. ^{pp. 322} Ayan.
Arakanschek & other Islands. Gray. in Japan. Expl. Report.

The northern form has the panicles densely spicate, var. f. Meyer, l.c., the capsules nearly or quite as long as the sepals & the stamens half their length; those from the other places have the panicle diffuse. In the Petro-pavlovskii plant the capsules are as long as the sepals, the stamens half as long & the anthers a little longer than the

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filament white, those from Ayau the stamens are one third shorter than the sepals, the anthers twice the length of the filament, and the capsule at the base of the oval seed nearly its thickness and almost half its length.

Luzula spicata St. H. France No. 1028;

Ledeb. l. c.; Bunth. l. c.; Meyer. l. c. Arakanetchken Island. Seem. Bot. Herbar., p. 42.

The specimens have the rather spicate panicle rigidly erect, & I do not find the foliaceous bracts mentioned in the specific character.

Seem. l. c.) Juncus castaneus, Smith, H. Brit. I. p. 383;

Ledeb. l. c.; Bunth. l. c.; Hook. l. c. Arakanetchken Island. Wet sandy flats.

In some flowers, the stamens are ^{as long} ~~much~~ longer than the capsule.

Juncus triglumis, Linn. ^{Spec. p. 367} Ledeb. l. c.
Bunth. l. c.; Hook. l. c. Ayau. ~~Arakanet~~
~~chken Island.~~ J. Small

The Sepals ^{are} one third shorter than the capsule, the exterior acute, the stamens of the same length.

Juncus triglumis, Linn. Spec. p.
467; Ledeb. l. c.; Bunth. l. c.; Ruprecht.
H. Samoga. cesural. No. 289; Frantz. Flora der
Taimyr. p. 23. Arakanetchken Island

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The stamens are much elongated, equalling or exceeding the ripe capsule.

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Cyperaceae.

Eriophorum vaginatum, Linn. Sp.

Tib. Anders. Pl. Scand. p. 130; ^{Tib. f. 30} Braun. Fl. Bojanie. p. 151;
Ruprecht. Fl. Samaria. consular. No. 291; Braun & Meyer.
Fl. Cecoz. p. 47; Ledeb. Fl. Ross. 4, p. 252; Kunth 2, p. 177.
Fabius Bay on mountain tops. J. Small

Eriophorum capitatum, Host; Hook. Fl. Bon-Cem.

2, p. 231; Ledeb. l.c.; Kunth, l.c.; Anders l. ^{Tib. f. 31} Ruprecht.
Sax, Braun. Fl. Bojanie. ^{Tib. f. 31} l.c.; Braun & Meyer, l.c.
Scam. Bot. Herald. Hook. & Arn. Bot. Bazaar, p. 131.
E. Schenckii, Ledeb. l.c.; Braun. Fl. Bojanie. l.c.
Braun & Meyer, l.c. Wet sandy soils at the base
 of hills, Arakumtchekhem Island.

The mature achenium is narrowly obovate, often
 apiculate, subcylindric but with the lower angular lines
 very distinct, a little longer than the style and as long
 as the stigmas. Immature achenia of apparently the
 same plant have the style three times ~~the length~~, & the
 stigmas twice their length.

Eriophorum Chamissonis, C. A. Meyer. in Ledeb.

Fl. Alt. 1, p. 70; Fl. Ross. 4, p. 253; Kunth, l.c. Wet
 hills, Arakumtchekhem Island.

In its cespitose habit & in the shape of the
 achenium, this very closely resembles E. vaginatum,
 and is perhaps only a form of it. The leaves appear a

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little narrower and the caputulum has the broad bracts at ~~the~~ ^{its} base. It also agrees well with specimens in the herbarium of Dr Gray.

Eriophorum lanuginosum, Hoppe Taschenb. 1800,
p. 168; Lindl. l. c.; Romnch. l. c.; Anders. l. c.; Fabius
Bay; on mountain tops.

Eriophorum angustifolium, Roth. Tent. Fl.
Germ. I, p. 24; Lindl. l. c.; Romnch. l. c.; Anders. l. c.;
Braunh. l. c.; Hook. l. c.; Hook. & Arn. l. c.; Scam. l. c.
Wet grounds, Arakanschetchen Island,

Elyna speciosa, Schrad.; Hook. Fl. Bor. Am.
2, p. 228; Ledeb. Fl. Ross. 4, p. 262; Kunth, Enum.
Pl. 2, p. 533. Arakantschotene Island. Sandy
flats near the sea side.

Elyna caricina, Bert. & Koch; Hook. l.c.;
Ledeb. l.c.; Kunth, l.c. Arakantschotene
Island. Pebby flats near the shore.

(Canaries by Mr. F. Booth.)

*Pratt. in
Casey scirpoidea*, ^{16x.} ~~H~~ Hook. fl. Br-Ame,
vol. 2, p. 208. Arakantschetschen I. On sandy flats
near the sea-side & on damp hills.

Casey nardina, Griseb., Mant. 2, p. 55;
Lindl. fl. Ross. 4, p. 267. ~~&~~ Heplurie, Boott. l.c. p.
209, t. 207. Arakantschetschen I. On stony flats
& dry hills.

Casey incurva, Lightf.; Lindl. l.c. p. 269;
~~Ruprecht.~~ fl. Tamg. Bisural. no 305; Boott. l.c. p. 211.
Arakantschetschen I. On sandy flats.

Casey lagopina, Wahl. Act. Holm. 1803, n. 37;
Lindl. l.c. p. 279; Rupr. l.c. Petropavlovsk^{ov} & Arakantschetschen I.

Casey glaucescens, ¹² Wahl. l.c. no. 44; Lindl.
l.c. 284; Boott. l.c. p. 214; Rupr. l.c. no. 304.
Petropavlovsk^{ov} & Arakantschetschen I.

Casey siccatia, Dewey; Gray, Man. 571; Boott.
l.c. 212. Petropavlovsk^{ov}.

Casey variflora, Smith, Eng. Bot. ^{t. 516}; Boott.
l.c. 224; Lindl. l.c. p. 297; Rupr. l.c. no. 300.
Arakantschetschen I. Dry hills & wet ground.

Carex fuliginea, Stevul. & Hoppe; Kunth,
Grun. Pl. 2, p. 435; Bratt. l.c. C. fuscida ex Ledeb.
l.c. p. 294. Arakantschetschen I. On dry hills.

Carex Grulini, Hook. & Arn. Bot. Bact. p. 118.
l.c. 27; Ledeb. l.c. p. 288; Bratt. l.c. p. 216. Petropavlovsk & Arakantschetschen I.

Carex rigida, Good.; Gray l.c. p. 517; Bratt.
l.c. p. 217; Rupr. l.c. no. 296; ~~Tschauder~~ ~~Middleton~~,
~~part 2, pt. 7~~ Arakantschetschen I. Along dry
banks of rivulets & hillsides - common.

Carex stans, Dcijer. Rev. Gen. p. 40.
Arakantschetschen I. Wet grounds at the foot of
hills.

Carex hyperborea, Dcijer. l.c. p. 43. C. sax-
atilis, var. ex Ledeb. l.c. p. 310. Arakantschetschen
I. Low wet ground.

Carex cryptocarpa, Meyer; Kunth l.c. p. 416;
Ledeb. l.c. p. 313; Bratt. l.c. p. 219. Petropavlovsk;

Carex saxatilis, Linn.; Bratt. l.c. p. 220;
~~Ledeb. l.c. p. 307~~; Hook. & Arn. l.c. p. 131. C. pullex, Good.
Lod. l.c. p. 308. Arakantschetschen I. On wet flats.

Carex compressa, ^{acta} Brown, in Ross, Vog. Knuth
l.c. p. 524; Brot., l.c. p. 220. ^{6. membranacea, thick, stiff, robust,} Arakansschetschee.
In marshy or wet ground.

Carex Polmieri, Brot., l.c. p. 224.
Petropaulovski & Arakansschetschee. In
damp ground.

Carex praecox, Jacq.; Gray, l.c. p. 526;
Ledeb. l.c. p. 301. Petropaulovski.

Carex capillaris, Linne; Gray, l.c. p. 527;
Ledeb. l.c. p. 295; Brot. l.c. p. 227.
Arakansschetschee 'on dry hill.'

Carex longirostrata, Meyer, Ceyk. Nov. t. 12;
Ledeb. l.c. p. 293. ^{6. canescens} ~~canescens~~ Canescens,
Knuth, l.c. p. 477. Petropaulovski

Carex ampullacea Good. Linne. Trans. II, 207
Lindl. Bot. Rev. IV, 318.

low Gray

J. Small

Gramineæ.

Elymus mollis, Grin. in Speng. t. Entd.
2, p. 72 nec R. Br. ex Ledeb.; Knuth, Eum. 1, p. 453;

Lev. Fl. Ross. 4, p. 332; Tant. Fl. Iambyc. in Meddene. Sib. p. 20; Trik. Fl. Cecos., p. 102.

Petropavlovsk and Arakantschene Island on
pebbly beaches near the sea

We have two slightly different forms from the
two localities, agreeing in most respects with the des-
criptions and specimens which we have seen of E. mollis,
and at the same time apparently not unlike E. dasystachys,
Grin. The glumes are certainly not broadly lanceolate as
in the former, nor are they glabrous as in the latter.
Are not the two forms of the same species?

Festuca ovina, var. veripara, Linn. Sp. 108;
Lorel. Fl. Ross. fl. p. 350; Knuth, Eum. 1, p. 398;
Kupr. Fl. Samoja. Cesal. eto. 310; Hook. Fl.
Bor.-Am. 2, p. 251; Scam. Bot. Hebr., p. 43. On
sandy ridges, in small tufts, Arakantschene
Island.

Festuca brevipolia, R. Br. in Parry's L. Toy.

(pp. p. 289, 309; Hook. Fl. Bor.-Am. l. e. F. brachyphylla, Schult. Mant. 3, p. 646; Knuth; Eum. 1,
p. 398. In dense tufts on stony & sandy flats & a rather
fuller form on hill-sides, Arakantschene Island)

Festuca scabrella, Torn. miss. in Hook. Fl.

Bon. Lm. 2. p. 252, t. 233. On hillsides in dense tufts, (in Akamchetchew Island).

In most respects, our plant appears to approach very closely F. altaica, Torn. in Ledeb. Fl. Alt. 1. p. 109 & Ge. Fl. Ross. t. 228. In its cespitose habit, its size, its diffuse panicle, the scabrousness of the palea and smoothness of the glumes, they are so much alike, that were it not for the shorter and lower palea, we should without hesitation refer it to that species. It accords ~~however~~ well with an authentic specimen of F. scabrella from the Hookerian herbarium, which, however, has (not) the spikelets ^{much} longer as described, perhaps by a clerical error, but, like ours, somewhat less than half an inch. Without specimens of F. altaica, it would be unsafe to refer it thither, however much the resemblances noted above lead to render their identity probable.

Poa alpina, Linn. Sp. 97; Ledeb. Fl.

~~Koss. 4, p. 370; Knuth, Enum. 1. p. 358~~

Poa arctica, R. Br. in Parry's 1 Voy.

p. 188; Hook. Fl. Bor. Am. 2. p. 246; Ledeb. Fl. Ross. 4. p. 373; Trautv. Fl. Taimyr. in Midden. Sibir. p. 19; Kunth, Enum. 1. p. 349. Abundant and in various forms, Crakanschekene Island. Also, a larger form from Petropavlovsk.

Poa casia, Sm. Brit. 1. p. 103; Turb. Fl.

Ross. 4, p. 374; ^{syn. sp. gramine.} Stein, p. 254. Poa Gaudini, Kunth, Enum. 1. p. 355. Crakanschekene Island on damp hillsides & on pebbly flats near the sea.

Some points of resemblance as the generally glaucous Poa vaginula, Griseb. hue, the length of the culm above the upper leaf and its scabrous summit as well as the general size & habit afford strong grounds to suspect that P. caesioides, Smith, P. Gaudini, Roem. & Schult., & P. minor Gaud. are not specifically distinct.

Poa nemoralis, Linn. Spec. 102; Turb.

Fl. Ross. 4, p. 375; Kunth, Enum. 1. p. 353; Hook. Fl. Bor.-Am. 2, p. 246. Petropavlovsk, on hillsides, in dense tufts. Also Crakanschekene Islands.

The specimens from Behring's Straits have considerable resemblance to P. laxa. May not this be an extreme northern ~~form~~ state of the former?

Colpodium fulorum, Turb. Fl. Ross. 4,

p. 385; Steud. Syst. Gram. p. 255. Poa fulva, Griseb.; Kunth, Enum. 1. p. 359; Rupr. Fl. Samoyd. Cisural.

No. 319; Hook. fl. Bor.-Am. 2, p. 247. Margin
of pond, Grakamschatchene Island.

In our specimens the spikelets are much reduced the greater number having but one flower with the rudiment of a second; none appear to have more than two. The plants are two feet or more high.

Colpodium latifolium, R. Br. Hook. fl.
Bor.-Am. 2, p. 238; ^{Exaptia} Fl. Taimyr in Medd. p. 18
~~lanceolatum?~~ Aretagnathis latifolium, Lovel.
Fl. Ross. 4, p. 434. Filza arundinacea, Hook. & Arn.
in Bot. Beechey, p. 131. Grakamschatchene Island,
on hillsides.

A small form may be Hooker's C. paniciflorum,
in which was observed the rudimentary flower as reported by him,
but a much larger one was found in the flowers of the larger
stems. The callus is furnished with very short hairs.

Dipsontia Fischeri R. Br. in Parry's 1.
Voy. App. p. 291; Lovel. Fl. Ross. 4, p. 386; Hook. &
Arn. Bot. Beechey, p. 132. ^{Metaplaty} Grakamschatchene Island.

var. refracta, rami refracti vel posentibus; ~~flor~~
spiculis unifloris, radicum nullo.

var. stricta, altior, firmior; ^{regularis} rami rachidi acute
adpresso; spiculis unifloris cum radimento.

We can find no trace of a rudimentary flower in the first
variety which besides is slender and lower than the
second. This is rather stout one foot in height with the

branches of the panicle widely erect and closely pressed to the rachis. The spikelets have a rudimentary flower about one third the length of the perfect one.

Catabiosa algida, Gr. Novit. Fl. Suec. Mant.
3, p. 174; Ledeb. Fl. Ross. 4, p. 388. Phuppsia algida,
Trant. Fl. Taimyr. p. 18 in Abredia. Sibiri. Hook. Fl.
Bor.-Am. 2, p. 238. Vilfa monandra, Hook. & Arn. Bot.
Beechey, p. 182. Arakamschetchen Island, on steep
naked banks.

Atrypis angustata, Ledeb. Fl. Ross. 4, p.
390, Poa angustata, R. Br.; Hook. & Arn. Bot. Beechey,
p. 182. In small dense tufts, on low flats near the
sea, Arakamschetchen Island.

Glyceria distans? Wahlenb. Festucæ dis-
tans? Kernik Enarr. 1, p. 393; Arrossis distans? Ledeb. l.c.

Three young specimens procured by officers of the Vincennes from Herald Island more closely resembling small plants of G. distans, in herba-grass than any other, we have seen, have been with some doubt referred to this species. They are cespitose, ^{flat linear} the leaves far exceeding the young panicle.

Glyceria areacea, Hook. Fl. Bor.-Am.
2, p. 248, t. 229. On hills & in flats near the sea
in dense tufts. Arakamschetchen Island.

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From the abundance of our specimens this would seem to have been a common grass and it is somewhat remarkable that no one appears to have brought its form thus plant. Some of our plants are more than a foot high

Henrichia alpina, R. & Schult. Syst. 2, p. 515; Hook. & Arn. Bot. Beechey, p. 132; Hook. Fl. Bor. Am. 2, p. 234; Rupr. Fl. Samoja. casual. No. 332; Kunth, Enum. 1, p. 36; Lodd. Fl. Ross. 4, p. 408. Hillsides, Arakamschechne Island.

Trisetum subspicatum, Beauvois; Kunth, Enum. 1, p. 295; Hook. Fl. Bor.-Am. 2, p. 244; Rupr. Fl. Samoja. casual. No. 328; Traub. & Meyr. Fl. Cebot. p. 104 in Middle. Sibz. Petropavlovski, Arakamschechne Island.

Aira brevifolia, R. Br. Deschampsia brevifolia, Hook. Fl. Bor.-Am. 2, p. 242; Lodd. Fl. Ross. 4, p. 422; Kunth, Enum. 1, p. 287. T. cespitosa var. Traub. Fl. Taimyr. p. 18 in Middle. Sibz. Wet flats near the sea, in small dense tufts, Arakamschechne Island.

no. 327

Rupr. Fl. Samoja casual ex
Aira cespitosa, Tourn. Sp. 96; Deschampsia cespitosa, Kunth. Enum. 1, p. 286; Lodd. Fl. Ross.

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4, p. 421; Frantz. Fl. Taimyr. p. 18 in Middendorff. Sib. Fl. Hook. Fl. Bor.-Am. 2, p. 242. Flats near the sea Arakantschetschen Island.

Calamagrostis deschampsiioides, Trin. &c. gram. 3, t. 354; Tidb. Fl. Ross. 4, p. 427; Rupr. Fl. Samoyd. cisural. No. 340; Frantz. & Meyer. Fl. Oehotica. p. 105 in Middendorff. Sib. Flats near the sea, Arakantschetschen Island.

Calamagrostis strobosca, Bong. veget. ins. Sitcha p. 171; Tidb. Fl. Ross. l. c.; Steud. Gram. p. 189. On hillsides, Arakantschetschen Island.

Calamagrostis Canadensis, P. de Beauvois sec. Seem. (l. o.) Hillside in tufts, Arakantschetschen Island.

Phleum alpinum, Linn. sp. 88; Tidb. Fl. Ross. 4, p. 458; Hook. Fl. Bor.-Am. 2, p. 234; Rupr. Fl. Samoyd. cisural. No. 333. Petropavlovsk.

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Equisetaceae.

Equisetum arvense, Linn.; Ledeb. Fl. Ross.

4, p. 486; Seem. Bot. Herab, p. 44; Hook. Fl. Bor.-
Am. 2, p. 269; Hook. & Arn. Bot. Beechey, p. 119; ~~Haller~~
Damp ground along rivulets, Petropavlovsk.

Equisetum sylvaticum, Linn.; Ledeb. Fl.

Koss. Fl. et. Seem. C. e.; Hook. C. e.; Traub. & Meyen
Fl. Sib. p. 106 in Middendorf. Sib. Damp ground
along rivulets, Petropavlovsk.

Equisetum variegatum, Schlecht.; Ledeb. Fl.

Koss. 4, p. 490; Hook. Fl. Bor.-Am. 2, p. 270; Traub.
& Meyen, Fl. Chot. C. e. Hillsides, Ural mountains
Siberian Islands.

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Lycopodiaceae.

Lycopodium Selaginoides, Linn.; Ledeb. M. Ross.,
4, p. 446; Seem. Bot. Heilat., p. 44; Hook. Fl. Bor.
Am., 2, p. 266; Hook. & Arn. Bot. Beechey, p. 132.

Mountain ravines, in shaded places, Thantar Isl.
and, J. Small. Arakamtschekhem Island, on banks
of rivulets.

Lycopodium annotinum, Linn.; Ledeb. M.
Ross. l.c.; Seem. l.c.; Hook. & Arn. l.c.; Hook.
l.c.; Grunow & Meyer, Fl. Cebot., p. 106 in Hiddend.
Sibir. ^{and Coal Pkg.} Ayau, J. Small.

Lycopodium complanatum, Linn.; Ledeb.
M. Ross., l.c.; Hook. l.c.; Grunow & Meyer, l.c.
Ayau, J. Small.

Selaginella rupestris, Linn. Spring; Ledeb.
M. Ross., 4, p. 500; Grunow & Meyer, l.c. Lycopodium
rupestris, Linn.; Hook. l.c. Pebby flats near the sea,
Arakamtschekhem Island. Younangki islet.

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Filicaceae.

Polypteronium Dryopteris, Linn.; Lideb. Fl.

Ross. 4, p. 509; Hook. Fl. Bor.-Am. 2, p. 259.

Mountain savine, in shaded places, Chikisoff Harbor
Shantar Island, J. Small.

Linn. Trans. 11, p. 178; T. &

Woodia ilvensis, R. Brown; Lideb. Fl. Ross. 4, p.

510; Hook. Fl. Sp. 635 Fl. Bor.-Am. 2, p. 259;
Franck & Meyer, Fl. Cebot. p. 108 in Meddelel. Sibir.

Petropavlovsk, on hillsides,

Linn. Trans. 11

Woodia glabella, R. Brown; Hook. Fl. 1, p. 648

Fl. Bor.-Am. 2, p. 259, t. 237; Lideb. Fl. Ross. 4, p. 511;

Among rocks, Chukamtoch. Siberian Islands.

While our plants in general outline, size and in the
crowded capsules are strikingly like Brown's figure of W. hyperborea, the perfectly glabrous rachis, the less deeply divided
pinnae extending nearly or quite to the base of the rachis, which is
nearly linear, and the narrow shape of the frond seem to determine it to this
species. The rachis at base is surrounded by chaffy scales and
the texture of the frond is firmer than any other specimen
of W. glabella we have seen while the color is inclining to
brown perhaps from its greater age.

Aspidium fragrum, Swartz; Franck & Meyer.

Fl. Cebot. c. e.; Hook. Fl. Bor.-Am. 2, p. 261. Nephrodium
fragrum, Hook. & Arn. Bot. Bucley, p. 132; Hook. & Arn. Ic.

Polystichum pinnatum Lindb. Fl. Ross. 4, p. 514. *Lastrea pinnata*, Seem. Bot. A. p. 46.
Fig. t. 70. Rocky hillsides, Drakamtschetschen Island.
A part of the specimen were presented by Dr. M. B. Boggis.

Aspidium spinulosum, Swartz; Hook. Fl. Ross.,
Am. C. e. *Polystichum spinulosum*, Lindb. Fl. Ross. 4, p. 515.
Lastrea spinulosa, Seem. Bot. Herat, p. 44. - Coal Bay,
Ayan & Shantar Island, J. Small. Petropavlovski
on hillsides. Many found from the caudex.

Cystopteris fragilis, Bernh.; Lindb. Fl. Ross. 4, p.
516; Frank. & Mey. ex G. Cehr. C. e.; Hook. & Arn. Bot. &
Beechey, p. 119, 132; Hook. Fl. Ross., Am. 2, p. 260. *b. tenuis*,
Seem. Bot. Herat, C. e. On hills among rocks, in small dense
tufts, Drakamtschetschen Island.

Asplenium Filix-femina, Bernh. Lindb. Fl. Ross.,
4, p. 518. Shantar Island, J. Small.

Blechnum Spicant, Roth; Lindb. Fl. Ross.,
4, p. 523; Hook. Fl. Ross., Am. 2, p. 263. J. Small.
Locality not given but from the shores of the Okhotsk Sea

Chapoor III.